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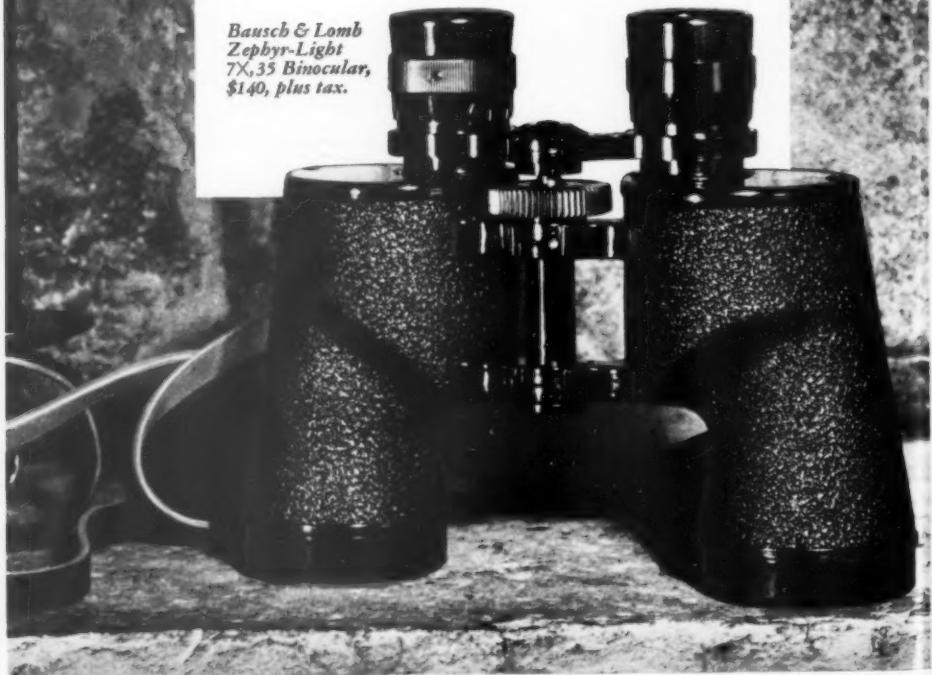
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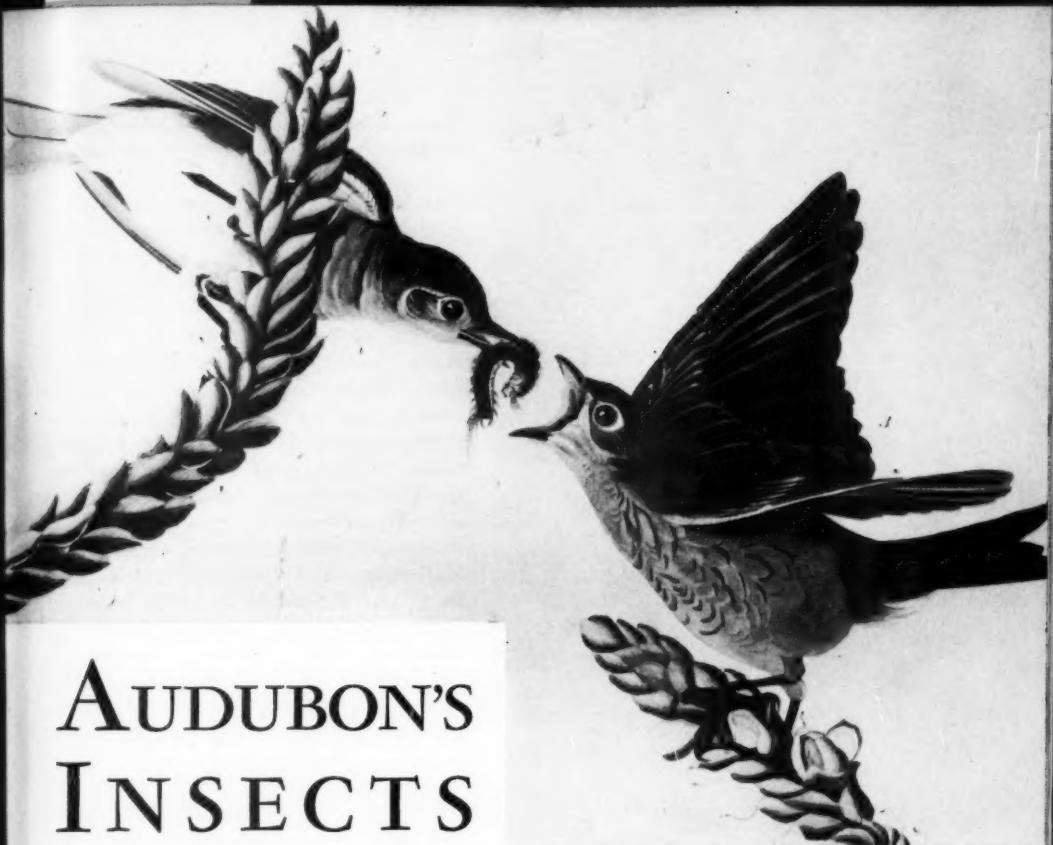
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Detail from Audubon's nighthawk print shows the bird in pursuit of a beetle



# AUDUBON'S INSECTS

By *Edwin Way Teale*

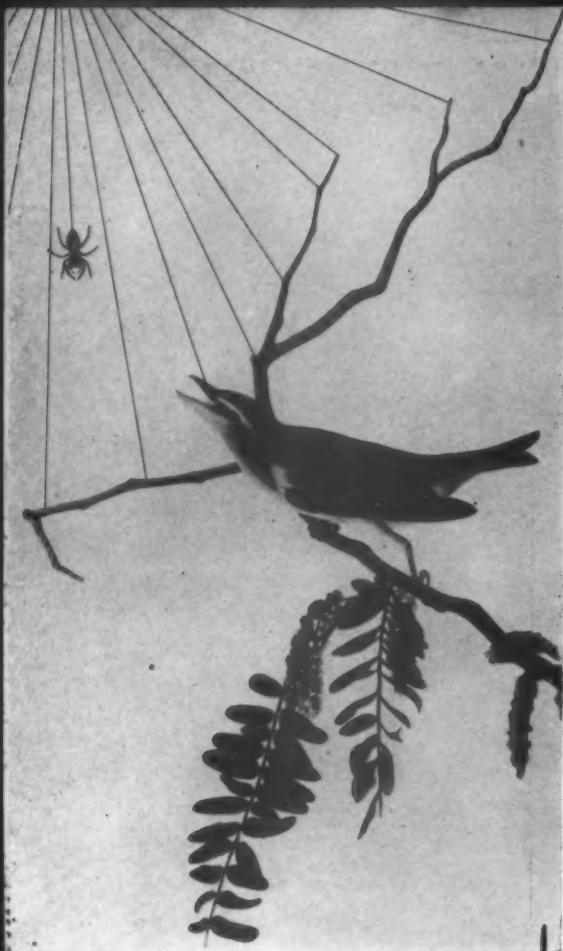
MILLIONS of words have been written about John James Audubon as a painter of birds. Millions of words have been spoken about the dramatic bird-studies in his Elephant Folio. The botanical subjects, the plants and trees and flowers that appear in his pictures, have come in for their share of discussion. But nothing, so far as I can find, has been set down about Audubon as a painter of insects.

Not long ago, at the New York Historical Society, I had an opportunity to examine many of the original paintings from which the Havell plates were produced a century and more ago. Of the 435 pictures in Audubon's great work more than half a hundred contain insects as well as birds. They cover a wide range. Moths, butterflies, bees,

**Audubon's bluebirds eat hairy caterpillars**

wasps, beetles, bugs, flies, parasitic insects and larvae of numerous species appear in the plates. In a few cases, mere conventionalized or stylized insects are employed. But, in most instances, the insects are drawn with such exactness and colored with such care that frequently they can be identified not only as to family but as to species as well.

Two interesting instances of such fidelity to nature are found in Plates 107 and 119. In the former, depicting the Canada jay, no insects are visible. But a wasp-nest occupies the foreground. Its form identifies exactly the species of paper-making wasps that produced it, *Vespula maculifrons*. Invariably, these insects shape their nests with the exterior fluted or formed with a series of rounded ridges. In Audubon's painting,



The worm-eating warbler in Audubon's Plate 34 is attracted by a black widow spider.

Of all Audubon's insects, as might be expected, the easiest to identify are the large and showy moths and butterflies. In the bill of the yellow-billed cuckoo, in Plate 2, there is a tiger swallowtail, *Papilio glaucus*. Above the heads of the green herons, in Plate 333, there is *Actias luna*, the pale-green luna moth with its flowing ribbon-tails. And, occupying a central position in the painting of the various grosbeaks, in Plate 373, we find the hop merchant, the angle-wing butterfly that scientists have named *Polygonia comma comma*. One of the *Aegeriidae*, the clearwing moths that fly by day instead of by night, is fleeing from the sparrow hawk in Plate 142. And, although the butterflies in the painting of the Macgillivray's seaside sparrow, Plate 355, are sketched in a little more roughly than most of Audubon's insects, they can be recognized as *Anartia jatrophae*.

Two of the most colorful of the night-flying moths—the Io and the Cecropia, *Automeris io* and *Samia cecropia*—appear in the same painting, Plate 82. Here an open-mouthed whip-poor-will is rushing toward the insects. In the original painting, you can still see Audubon's penciled-in words, "Io" and "Cecropia," indicating the positions where the two moths were to be placed. Two butterflies, beautifully reproduced, form part of the composition of Plate 198, the charming group which shows the Swainson's warbler as its central figure. The lower butterfly is *Eumaes atala* and the upper is *Junonia coenia*, the familiar buckeye.

It was a moth that aided Audubon in representing the large, long-necked trumpeter swan life-size within the confines of his Elephant Folio page. Plate 406 shows the swan reaching back to obtain a moth floating in the water at its side, apparently one of the *Catocala*, or underwing, moths. This position, with

this identifying characteristic is apparent at a glance. The second plate shows only one wasp, or rather only part of one wasp, an insect in full flight disappearing behind a leaf with a yellow-throated vireo snapping at it as it passes. The sharp-tipped abdomen of the wasp is visible and on it are five bands or markings; they identify the insect as *Elis 5-cincta*. A relative of the yellow-jacket, this wasp is an enemy of beetle larvae in its youth. Still another species of wasp and another kind of wasp-nest appear in Plate 40 below the bright forms of the redstarts. The flat, open nest, as well as the forms of the wasps themselves, indicate that the insects belong to the paper-making *Polistes*.

The parula warbler plate shows a measuring worm and also, at left, a grasshopper.

the head and neck turned to the rear and bent down, lessened the area that a full-size reproduction would demand.

The larvae of Lepidoptera, as well as the adult butterflies and moths, play a part in the Audubon paintings. This is to be expected in view of the importance of caterpillars in the diet of many birds. Plates 113 and 131, showing respectively the bluebird and the robin, represent the parent birds feeding their young hairy caterpillars, probably the immature forms of tussock moths. The red-headed woodpecker, in Plate 27, is holding in its bill what is unmistakably the caterpillar of a monarch or milkweed butterfly, *Anosia plexippus*. And, looping its way up the edge of an iris leaf in Plate 15 is a small and slender measuring worm, one of the innumerable progeny of the *Geometridae*. Ready to snap up this larva is one of the parula warblers. Not infrequently in the plates an insect is the object toward which the birds are converging or directing their attention; it is the element that binds the picture together.

Spiders, as well as insects, find a place in the natural settings in which Audubon depicts his birds. A black widow, *Latrodectus mactans*, appears in Plate 34, attracting the attention of the two worm-eating warblers. A curious spiny-bodied spider with the lengthy scientific name of *Gasteracantha cancriformis* is an important element in the painting of the white-eyed vireo, Plate 63. A sedentary spider of the genus *Theridion* appears in Plate 394, the painting of the four fringillids, and, in Plate 48, the uppermost of the two Cerulean warblers is darting toward a small jumping spider on a leaf. Another jumping spider, in the painting of the red-eyed vireo, Plate 150, reveals that Audubon sometimes chose his spider-subjects without investigating their habits too closely. Three white dots on the back of this spider

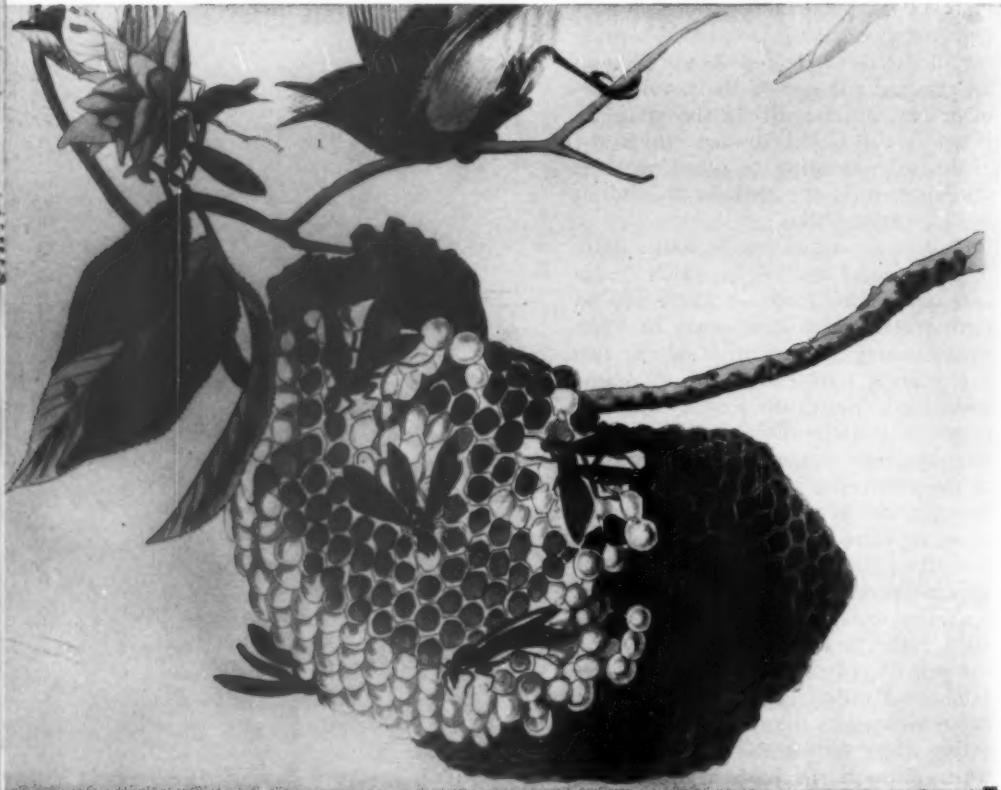


identify it as *Phidippus audax*. Dr. Willis J. Gertsch, of the American Museum of Natural History, who kindly identified the spiders mentioned in this article, points out that *audax* catches its prey by leaping upon its victims or overtaking them wolf-fashion, rather than by ensnaring them in spider-silk. In Plate 150, however, Audubon shows his spider in the midst of spinning a large orb web.

Anyone who has read Audubon's "Journals" will recall his narrow escape from death at the hands of an old hag and her two ruffian sons in a lonely prairie cabin. In recording the events of that day, he recalls that as he ended his long march along a faint Indian trail and came within sight of the cabin,

"The Night Hawks were skimming over and around me, attracted by the buzzing wings of the beetles which form their food. . . ." Perhaps it was a memory of this evening that led him, when he came to paint the nighthawks which appear in Plate 147, to show one of the birds swooping after two beetles in mid-air. Three dark dots decorating each of the yellowish wing-covers of the uppermost of the insects identify it as *Pelidnota punctata*. This beetle is commonly found on grape vines during the day and at night it is frequently encountered bumping along street lamps, attracted by the light. Another well-known member of the beetle tribe, one of the *Phyllophaga* or May beetles, has fallen

Detail of the American redstart print shows a paper-making wasps' nest



victim to the Mississippi kite in Plate 117. What appears to be another of these same beetles is being gulped down by the summer tanager in Plate 44.

Ground beetles of the *Carabidae* group, hunting insects that prey on other insects and rarely fly except at night, are found in the paintings of the avocet and the warbler and bluebirds, Plates 318 and 393, while the beetle attracting the attention of the shoveller ducks in Plate 327 appears to be one of the *Scarabidae*, a metallic green American relative of the sacred scarab of the Nile.

Of all the Coleoptera, the ones that seem to be Audubon's favorites are the little ladybirds, the *Coccinellidae*. They

appear in several plates, notably in 14 and 134, the paintings of the prairie warbler and the Blackburnian warbler. The work of the grubs of various wood-boring beetles is shown under fallen bark or on old logs or tree-stubs in a number of the pictures just as the winding traceries of the leaf-miners, the larvae of tiny moths that tunnel through leaf tissue, appear in the foliage backgrounds of other paintings.

A variety of odd insects add to the interest of many plates. Above the heads of the Virginia rails, in Plate 205, the chocolate-brown bug with the curious coglike formation of its thorax is unmistakable. The insect is one of the *Reduviidae*, the so-called wheel bug,

Yellow-billed cuckoo (detail) catches a tiger swallowtail butterfly





A bee fly is at the center of the popular black-billed cuckoo plate.  
Opposite, a worm-eating warbler belies his name, pursuing a spider.

*Arilus cristatus*. Its sharp-tipped beak, which is normally carried folded back beneath its head, is used to drain away the blood of its insect victims.

Only slightly less primitive than the wheel bug is the dark, four-winged insect fluttering in front of the gull-billed tern in Plate 410. This is one of the fish flies, possibly *Chauliodes*. A near relative of this insect is the Dobson fly, widely known in its immature, aquatic form as the hellgrammite. All of these insects, of course, are not true flies. The latter of the Diptera order, are characterized by a single pair of wings.

True flies of numerous kinds, usually too small or roughly sketched to identify, appear in several of the plates. One of the *Sarcophagidae*, or flesh flies, is zooming above the heads of the tyrant flycatchers in Plate 359 and a bee fly of the *Bombyliidae* group is fleeing from a black-billed cuckoo in Plate 32. On any bright day in summer, flies of this latter group can be seen hovering like miniature helicopters in sheltered sunny spots, moving a few feet to hover once more.

In Audubon's painting of the upland plover, Plate 303, a wasplike orange-hued insect is rushing away from the



Vermilion Warbler

DACNIS VERMIRORA.

Plant Phytolacca decandra Indigo Poke berry



pursuing bird. The insect is the large ichneumon fly, *Ophion macrurum*. Females of this species lay their eggs in the bodies of immature insects and thus provide an ample food supply for their carnivorous offspring. Frequently cocoons of the cecropia moths are parasitized. In spring, when emerging time arrives, the adult *Ophion macrurum* appears instead of the expected cecropia.

A bumblebee and a grasshopper add to the interest of Plates 79 and 192, the paintings of the kingbird, or bee martin, and the northern shrike. In the first picture, the kingbird has just captured a black-and-gold bumblebee and, in the second, one of the shrikes is darting toward a long-horned grasshopper clinging to a twig above its head.

As is the case with most of the insects that appear in Audubon's paintings, these small and colorful creatures play an important part in the picture's composition. They help place the birds in their natural settings. They help tell the story the picture is intended to convey. They make a point and have a purpose. By showing his birds surrounded by the plants and insects with which they are associated, John James Audubon was able to increase both the informational and the artistic value of his work.

**Beetles pursued by the shoveller ducks and the avocet, below, determine the**



**design of the print. In the Mississippi kite print, above, the victim is caught.**





Bighorn photographed in Yellowstone National Park by Karl H. Maslowski

# BIGHORNS

## *on the BORDER*

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By Arthur F. Halloran

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U. S. Fish and Wildlife Service

WE had spent the night on the edge of the bighorn country in a snake-infested tumble-down stone shack once "home on the range" for a Mexican goat-hereder. It was 4:45 in the morning when we left the cabin. At six o'clock, from the top of the range, we located two small moving objects about a mile away. They might be sheep!

For six weeks we had been searching for the small remnant band of less than forty sheep that ranged the San Andres Mountains of south-central New Mexico. The year was 1941, and the San Andres National Wildlife Refuge had just been created. Aside from a few records by local ranchers, no bighorns had been sighted for years. Were we on their trail at last?

With pounding hearts, the local mountain man and I moved closer. We crossed a deep canyon and climbed onto a ridge. Here my companion waited while I crossed another canyon. Since sheep have sharp eyes, I slipped over the rim to avoid being seen on the skyline.

It was now 9:30 and although there was the encouraging rumble of rolling rocks in the distance, I vainly combed the canyon with my binoculars for a sight of the sheep. Twenty-five minutes later, I spotted a ewe running down a steep slope toward a rock shelf which was backed by caves. A tiny lamb scurried close at her heels. Then came an-

other with a larger lamb. And there, on the narrow shelf of rock, stood five more sheep—one, an extremely large ram with massive horns! While I watched, he stalked into the largest cave, ducked his head belligerently, and forced a younger ram to retire. He then lay down in the center of the entrance. Careful not to obstruct his view across the canyon, some members of the band rested to one side and to the back of him, while the rest of the group lay outside on the narrow ledge.

This was a never-to-be-forgotten moment! Here was rich reward to climax the weeks of vain searching and of sleeping near mountain waterholes. Now that the sheep were found, we could devote ourselves to the problem of restoration.

What were the factors that had decimated this herd, and what remedies were to be applied? Did these bighorns have enough forage and adequate range? Were they suffering from competition for food and space from domestic stock and wild game? Were poachers killing them? Was water too scarce?

The amount of water available to game on this refuge is adequate except at certain seasons and, although water development work has been carried on in the area, this factor is not as critical as on the sheep ranges of southwestern Arizona. Poaching was a problem, but with active patrol the drain on the herd from illegal killing has been reduced.



Competition for food and space, and depredation by predators seemed to be the major factors.

In order to get a more comprehensive view of the problem, let us look at the character of the country and examine the history of its land use.

The semi-desert range that is the San Andres Mountains lies in a north and south direction and in places is less than six miles wide. The mountains rise sharply out of comparatively flat country that stretches for miles to the east and west. Originally, these "flats" were without permanent water and it is reasonable to believe that endemic game could not have occurred in large numbers over such vast waterless areas.

As man moved into these "flats" with his domestic cattle, sheep, goats and horses, he sank wells and produced permanent water. This stock, no doubt, is much more numerous than were the antelope and deer which inhabited the region before the advent of man. Not only did domestic animals crowd the range and eat the forage, their presence presented a new and greater food supply for carnivores. The mountain lions, bobcats and coyotes increased as this abundant

dant food supply was literally spread at their feet. Stock raisers became alarmed and started a campaign against predators. Naturally the work of control was done in the "flats" which were easy of access, rather than in the mountains. Thus, for years, increasing numbers of predators drifted through the narrow San Andres range.

As more and more stock was put on the plains, these animals grazed higher and higher into the mountains, eating the choicest food. The predators followed. The native sheep, "squeezed" from east to west, as in a pair of pliers, retreated to the highest, roughest areas where succulent foods were more available and where their native abilities enabled them to elude their natural enemies.

If conditions were to be made more favorable for the sheep, it was evident that they would need a release from the

The border bighorn is a variety of the Wyoming sheep. Although studies in the Southwest have lagged behind the life-history work done in the northern states, part of the pleasure of field work on the border is the possibility that the next sight of sheep may uncover clues that will aid in their restoration. Photograph at right by Gilbert E. Wardell. Photograph at left by Karl Maslowski.

cramped range into which they had been forced. Therefore, the area was set aside as a federal refuge. This move lessened the pressure by the elimination of domestic sheep and goats, and by a reduction in numbers of horses. Investigation proved that the mule deer, also, were competing with the bighorns for food. Protected from hunters since 1926, the deer had become numerous and were browsing the western side of the range too closely. Since bighorns and deer feed on many of the same plants, it was necessary to reduce the deer population if the bighorns were to increase. Therefore, in cooperation with the New Mexico Fish and Game Department, three public deer hunts were conducted and several score deer of both sexes were removed.

This provided greater range and better forage for bighorns, but were they to be left to the mercy of the carnivores who would naturally turn to the sheep since their former food supply had been reduced. Since the sheep were on the very brink of oblivion, every individual counted, and a degree of predation that might be ignored under more favorable circumstances could not be tolerated.

Range studies had already indicated that coyotes and bobcats were numerous. Research into the literature revealed that both had been known to molest bighorns. Analysis of mountain lion droppings proved that these animals were preying on the sheep. Therefore, a predator-control program was carried on simultaneously with the other management practices that had been instituted. Of course, we realize that there are two schools of thought on this sub-



ject of predator-control but, so far, the results of these combined management practices have been promising. In seven years, the band of less than 40 sheep has increased to 85!

The results obtained on the San Andres Range do not prove that our methods should be completely adopted on other ranges. Local conditions vary, and each area has its own particular problems. There are sheep in favored localities in other parts of New Mexico, in Arizona, western Texas, southern California and Nevada; each of these localities have different problems and different intensities of the various factors encountered on the San Andres Refuge.

A study at the Kofa Game Range in Arizona, for instance, revealed that until 1945 but one yearling sheep for every six lambs was seen by refuge personnel. In other words, lambs were being born, but were not surviving their first year.

Expressed in game management terms, the lamb-yearling ratio was 1 to 0.16. Why?

Illegal killing by man did not seem to be the answer, since poachers tend to kill large mature males with good trophy heads. Winter-kill did not seem to be the answer, since winters in southwestern Arizona are mild. Lack of proper forage did not seem to be the answer, since the range contains lots of feed compared to the number of animals present to consume it.

Among the factors that contributed to the condition were lack of water and too much predation. The remains of young sheep that were found on the range indicated that predators were securing some of them. As in New Mexico, the assignment of the Fish and Wildlife Service was to restore bighorn numbers. In late 1943, a predator-control program was instituted and is still in effect.

As for water, careful studies revealed that in years of deficient rainfall (and these years are frequent on the desert) the natural rock waterholes, or rain-filled "tanks" become very low or dry. When most of the tanks or *tinajas* are dry and only a few large ones contain water, sheep concentrate at these locations. The Fish and Wildlife Service, therefore, developed fifteen of these watering places, making them deeper and providing more shade, thus insuring more water in droughty times. Another improvement was the blasting of the slippery rock sides of certain tanks that had become death traps. When the water became low in such tanks, the sheep slipped into them, could not escape, and drowned. The blasting removed the hazard and water is now safely available.

By 1946, the lamb-yearling ratio on the Kofa Range showed a change—an increase from 0.16 to 0.82. There is also an increase in the numbers of the younger age classes of both sexes. It seems reasonable to say that the decline on the Kofa Range has been stopped.



and that the population curve is beginning to climb.

There is still much to learn about the management of the bighorns of the border states, and about their life-history as well. You can start a lively argument any day about the lambing season of the Arizona bighorn. Men who have spent years on the desert will insist that some of the ewes lamb twice a year. Sight records in southern Arizona now indicate a spread of at least three months in the lambing season. In addition to large and small lambs, sheep of the previous year's crop may be present in a band. The gestation period of our native sheep is variously stated to be from 150 to 180 days. Further detailed field work will settle this subject of campfire banter.

Much speculation in the border country also exists as to whether or not sheep have twins. We have not been lucky enough to settle this point to the entire

## NEW MEXICO



Established by Presidential Order in 1939, the Kofa Range contains about 500,000 acres and Cabeza Prieta almost 1,000,000 acres. The San Andres Refuge contains a little more than 57,000 acres and was created in January 1941.

satisfaction of all the skeptics, but the fact that on June 1, 1939, National Park Ranger John Bauman witnessed the birth of twin lambs to a ewe in Yellowstone National Park, lends credence to our thought that under favorable conditions twins are not a distinct rarity to the border sheep, a variety of the true bighorn of Wyoming.

Bighorns on native ranges, are, generally speaking, dainty eaters. They will pick a tender morsel here and there or sometimes stand quietly picking the most succulent leaves and recent growth on one side of a palatable bush. At other times they graze on herbs and grasses, particularly when the latter are green. The exception to this rule of fastidious feeding is seen when the bighorns concentrate for an extended period near a favored bed ground. At these locations, even on ranges untouched by domestic stock, the choicest plants are heavily utilized. This condition gives a hint that

bighorns need an extensive range. When one of these concentration areas no longer can supply enough food the sheep must move on. If they have suitable range to which to move they will probably do well. If, however, the range is so restricted that the sheep cannot move freely to similar or more desirable locations, the range and the sheep will deteriorate.

In Texas, Vernon Bailey found that the sheep ate Mormon tea (*Ephedra*), trumpet-flower (*Tecoma*), and silk tassel (*Garrya*). In New Mexico direct observation indicates that a complete list of mountain sheep food plants would ultimately cover most of the plants of the range. Some favored foods of south-central New Mexico are: silk tassel (*Garrya*), mountain mahogany (*Cercocarpus*), sotol (*Dasylinion*), fendlerbush (*Fendlera*), big mallow (*Sphaeralcea*), prickly pear (*Opuntia*), wild onion (*Allium*), day flower (*Commelina*), black and side oats grama (*Bouteloua*) and green sprangle-top (*Leptochloa*). In the deserts of southwestern Arizona plants utilized include Mormon tea (*Ephedra*), paloverde (*Cercidium*), ironwood (*Olneya*), coffee-berry (*Simmondsia*), big mallow (*Sphaeralcea*), and a host of other desert forms. The famous naturalist William T. Hornaday, reported in 1908 that, in the Pinacate region of Sonora, just south of the Cabeza Prieta Game Range, sheep ate "Galleta grass, paloverde, torte prietao, *Sphaeralcea*, and white brittle bush."

In general, I think we can say that the decline of the native sheep in the southwestern United States has been due to range competition, lack of permanent or semi-permanent water, excessive numbers of the large predators, illegal killing, and varying local factors. I believe we can state that it is now possible to increase the numbers of bighorns on native ranges in the southwest if certain conditions of land status are met, and known game management techniques are utilized.



## A Small Brown

MR. JONES, who lives in a comfortable home about thirty miles from Boston, found his wife in tears one day. On inquiring into the cause of her grief, he received this reply:

"Everyone else has bird-feeders with all kinds of rare birds and we don't even have a feeder! Do you know that the Williams have a pink-sided sparrow?"

"Please," replied Mr. Jones, "a pink-sided junco."

"All right, junco," sobbed Mrs. Jones, "but we better get a feeder soon. People are beginning to talk. They are saying all kinds of dreadful things."

"Such as—?" inquired Mr. Jones.

"Well, if you must know, I overheard someone say that you were too tight to feed the birds in the wintertime."

This was all Mr. Jones needed to spur him on. Both he and his wife had always loved birds but he had never gotten around to establishing a bird-feeding station. Within a few days they had taken the preliminary step, securing life memberships in both the Massachusetts and the National Audubon Societies. They bought all the books every bird lover must own, including Peterson's "A Field Guide to the Birds" and the "Audubon Bird Guide" by Pough and Eckelberry. They already owned binoculars. Next they made a special trip to Boston to buy window feeders, hanging feeders and suet holders—all equipped with the latest devices for thwarting squirrels and English sparrows. In addition, they bought an electric bird-drinking fountain guaranteed not to freeze in the coldest weather, a hundred pound sack of bird food and several jars of peanut butter. It was all Mr. Jones could do to prevent his wife from ordering wall paper, lavishly decorated with birds, and handsomely framed Audubon prints.

"Wait until next time," he said as he nervously grasped his bill-fold.

As soon as Mr. Jones got home he happily began to hang bird-feeders from convenient limbs and to tack up suet-holders on tree trunks. A neighbor, Mr. Elkins, spied him at this task and rushed over to Mr. Jones with a horrified look on his face.

"You know, you can't put those things just anywhere," he said. "You have your feeders exposed to the north wind and what's more you need some evergreens and berry-bearing shrubs." Looking around still further, Mr. Elkins had more advice to offer: "What you really need is a large plate glass window running the whole length of your living room. Then you can see what you've got at your feeders."

The advice of Mr. Elkins was followed. A nursery was contacted and many evergreens and berry-bearing shrubs were planted at strategic points. The feeders were located near cover in sheltered places, and also where they could be viewed from the projected plate glass window. Carpenters were soon at work, and a splendid window was installed, which covered the entire length of the living room. Mrs. Jones hadn't been idle either. She had ordered the wall paper and prints. With their arrival most of the lower floor was redone in a manner that couldn't help but meet the approval of the most exacting bird-lover.

At last the crucial day arrived. Everything was in readiness—all the projects completed and the feeders filled to the brim. Both Mr. and Mrs. Jones and their two children waited with bated breath before the plate glass window. Not a movement outside. Could it be that the birds wouldn't come? Perhaps they would continue to avoid their yard, resenting all those years when it was barren of food and cover. Mrs. Jones felt the greatest anxiety. She knew what peo-

# Bird



ple had been saying and how her friends seemed a little cool and superior. How proud she would be when she could tell them all:

"Come over for tea and see my pink-sided junco!"

As the family kept their vigil before the window, a small brownish bird crept hesitantly from out of the foliage. It stood for a moment peering suspiciously at the huge feast spread before it, and then fluttered away. The whole family became hysterical. What was this strange bird? They had seen nothing like it before. Each child seized a bird guide while Mr. and Mrs. Jones thumbed through Audubon's "Birds of America."

After a futile search through all their ornithological literature, Mr. Jones announced that he was going to call Mr. Gripscom. With a trembling hand Mr. Jones took down the telephone receiver and shouted:

"I want Mr. Gripscom!"

How stupid of the operator. Everyone should know the number of Mr. Gripscom, the famous ornithologist. Finally the call goes through and Mr. Gripscom learns that a small brown bird has been seen at the Jones' feeder. On learning this, he promises to be right out. In a few moments he is in his roadster and burning up the roads.

As Mr. Gripscom reaches the Jones' residence, he is pounced upon by the entire family who incoherently shout

—By John V. Dennis

things into his ear. He finally gathers that the small brown bird is at that very moment eating millet seed within clear view from the window. Mr. Gripscom is pushed, without further ceremony, through the hall and into the living room where he is confronted by an enormous plate glass window, a pair of binoculars and outside, a small brown bird. He takes out his own binoculars, directs them toward the bird and maintains a long silence. Every eye is glued upon him. The only noise is the beating of quaking hearts. All are fearful that he will turn toward them in disgust and pronounce the bird some common species, such as the English sparrow. The binoculars come down. Mr. Gripscom grunts and begins to thumb through a bird guide. Mr. Jones can't stand the suspense any longer.

"Perhaps a greater redpoll?"

"No," replies Mr. Gripscom. "My heartiest congratulations go to you and your family. You have the third Harris's sparrow to be seen in New England—an immature male!"

At this news Mrs. Jones shrieked and fell on the sofa in a dead faint. Mr. Jones rushes into the pantry, seeking something to revive his wife. He finds a bottle containing some spirits of camphor. He takes a sniff or two and then leaps, bottle in hand, to the side of his prone wife. She opens her eyes and her pale lips move.

"Darling, a Harris's sparrow! What a social triumph!"



*Pen sketches*

by

**Harold A. Gray**

## Feathered Guests

Rossman Giffarden  
April 11  
Blue Heron

Sherman Berlin  
G. Johnston  
Nuthatch

Hopkins  
Cedar Waxwing

G. Johnston  
Sherman  
Sauer Johnston  
Henderson  
Sparrowhawk

Halla  
Kramer  
April 19  
Barn Swallow

Moss Zylaherst  
Red-winged Blackbird

Kramer  
April 19  
G. Johnston  
Mrs. Ritter

April 22  
G. Johnston  
Mrs. Ritter  
Sparrow

# WILDLIFE *is part of our* SCHOOL

— By Edith L. Johnson

TAKE fifty normal, active boys; a sixty-acre wooded campus plus a forty-acre farm and a private game preserve across the road; add about one hundred species of birds and other wild creatures; stir up a lively interest in wildlife, and see what you get. Here at Elgin, Illinois, the result is called The Chicago Junior School.

"Freeze! FREEZE!" It was David who gave the word. A slate-colored junco had just arrived at the window-ledge feeding-station of our classroom. The lesson was temporarily interrupted while the other pupils slowly rose from their seats

to get a glimpse of the bird. Although David, seated nearest the window, had the position and title of "freeze-master," anyone who first spotted a bird on the sill was privileged to cry "freeze!"

Freeze, also, was a word that could be used to describe the chronic condition of the water in the birds' drinking saucer. The three "R's" were secondary to keeping the water in proper condition. Any time during the cold winter days, Lenard or Phil or Robert might be discovered half in, half out the casement type window. Challenged, their explanation was sure to be: "The drinking dish needs to be thawed out."

There are other bird-feeding stations on the campus, but this window-ledge is the particular project of the Middle Grade, which is composed of fifth and sixth grade pupils. Besides bird seed and water, there is suet, kept in a wire rack made by Jon, an Upper Grade pupil.

The juncos, chickadees and English sparrows were the first to visit the ledge, and we longed for a cardinal. We used to see the red birds eating dry berries at the edge of the woods, and wondered how long it would be before they visited our station.

One day when Mrs. Mead, the visiting art teacher, was giving a lesson, the question was asked: "What color is a cardinal's bill?" The bird books showed several shades of beaks.

"Yellow," said some of the boys.

"Orange," declared others.

"Black," someone claimed.

The period was over before the drawing was finished, but scarcely had Mrs. Mead left the room when the cry came:

"Freeze! FREEZE! There he is now. The CARDINAL!"

Everybody began talking at once. "The beak is pinkish-orange!" "No, it's orangy-pink!" "Look, there's some black

The author (at left) in her classroom. Cardinal photographed by C. P. Fox.





Raccoon photographed by C. Huber Watson  
on it, too!" Whatever the color, the cardinal's beak was dipping hungrily into the dish of bird seed. In a moment, the bird flew away and the boys flew at their work, seizing crayons to blend whatever color each one chose to call it.

Larger birds such as pheasants, crows and bluejays patronized the feeding-tray down by the Cedar Swamp. Every morning, during recess, Jon carried a bag of feed to this tray, and one day just before Christmas, he noticed that whole ears of corn began to disappear in a mysterious manner. Jon was determined to discover the culprit so one afternoon, when his schoolmates were putting on a Christmas show, he sat for hours perched in an arborvitae, watching and waiting. His patience was rewarded, however, for finally a little European mouse deer came up to the tray. It had strayed over to the feast from the game preserve which was just across the road.

Tracking is one of the favorite sports on the campus, as soon as the snow begins to fly. Then, over the hills and knolls and down the ravine, the boys explore with paper, pencil and foot ruler in their mitten hands, eager to make drawings of the tracks and to measure their exact size.

Rabbit tracks criss-cross the campus. Squirrel tracks are all about, and the little tracks left by running mice. A pheasant had walked along the road down the hill toward the football field and then suddenly taken off in flight. One day a raccoon track was found crossing the snow-covered lawn and driveway close to the school building. It could easily be followed across the garden plots and over the hill to the picnic grounds. How to identify all of these footprints was the problem.

"Get Ernest Thompson Seton's books from the library," advised Mr. Kilburn, the superintendent. So Jim, assistant to the librarian, searched through the books and furnished the classes with excellent material.

An exciting indoor activity was the making of a large wall-sized map of the school grounds, on which was located all the wildlife areas which the boys had explored. Down on the floor with brown paper and crayons went the boys in their stocking feet. The map was made to



Cottontail rabbit in snow photographed by W. Bryant Tyrrell

scale, enlarged from a small map furnished by the school office. Phil shone at this kind of work, and a supplementary lesson in seventh grade ratio and proportion helped to clarify it.

It was on February 22 that three eighth graders took their free time to go for a slide down the ice trail. Trudging with their sleds up hill past the summer camp cabins, they reached the crest of



Squirrel tracks in snow photographed by Clifford Matteson.

Council Ring Hill, sat for a moment on the windswept benches of the Council Ring and took in the broad and inspiring view of the Fox River Valley. Then they belly-flopped on their racers and steered for the cedars. Down at the foot of the slope a real thrill awaited them. As they struggled to their feet and looked up at the trees, they discovered the first robin of the season.

With the arrival of the first robin it was time to start the Annual Bird Chart. Two large strips of wall board, 18 x 84 inches, were covered with brown paper and fastened with wooden buttons to opposing doors in the foyer of the school building. With a twist of the buttons the charts could be taken down as often as new bird arrivals were reported. Bird pictures, two inches square, were cut out of ten-cent bird guides and pasted on the chart with the name of each bird seen. Also the name of at least two boys who saw the bird were recorded, together with the date.

When the killdeer arrived on April 5, the boys were presented with a problem. There was no two-inch print to be pasted beside its name. So Lenard made one, copied from a larger picture.

His efforts met with such success and praise, that he was eager for another such opportunity. A few days later a "Bannockburn" warbler was reported. No such warbler could be found, so the boys decided it was a Blackburnian. "Good," said Lenard, "Now I can draw a picture of a ball-bearing wobbler!"

Soon a bluebird arrived, then a house wren was heard trebling in a lilac bush.

On April 13, Lenard and Bobbie came up to tell us that: "The cedar waxwings are here! Hundreds of them. On their way north!"

April was also the time when the mallards arrived. "Take your boys for a walk down the side road past the lake," Mr. Kilburn suggested. The lake was on private hunting property where the boys were allowed to go if an adult were along, and only on days when there was no shooting. That trip chalked up a song sparrow, kingfisher and sparrow hawk, not to mention a dozen or so clay pigeons. It was not until the next trip past the lake, however, that we saw seven mallards swimming on the surface.

Since wildlife is a constant source of interest, the school has a Wildlife Committee. Appointed by the Student Council, the five members consisted last year of an eighth grader, named Bruce; of two seventh graders, Jon and Arthur; of Jay, from the Lower Grade, and of Robert, a sixth grader, who was elected as scribe and wrote "The Birch Bark Bulletin," the official column of the Wildlife Committee and a regular feature in the school paper, *The Cedar Bough*.

Since wildlife is all about us at Chicago Junior School, it integrates automatically with living, rather than with the curriculum. When five or six different warblers can be seen right outside the classroom window all in one morning, identification with nature becomes a grand adventure. We are sure that youngsters who discover such joys early will, in later years, become valuable citizens and enthusiastic conservationists.



*Photograph by  
Cruickshank*

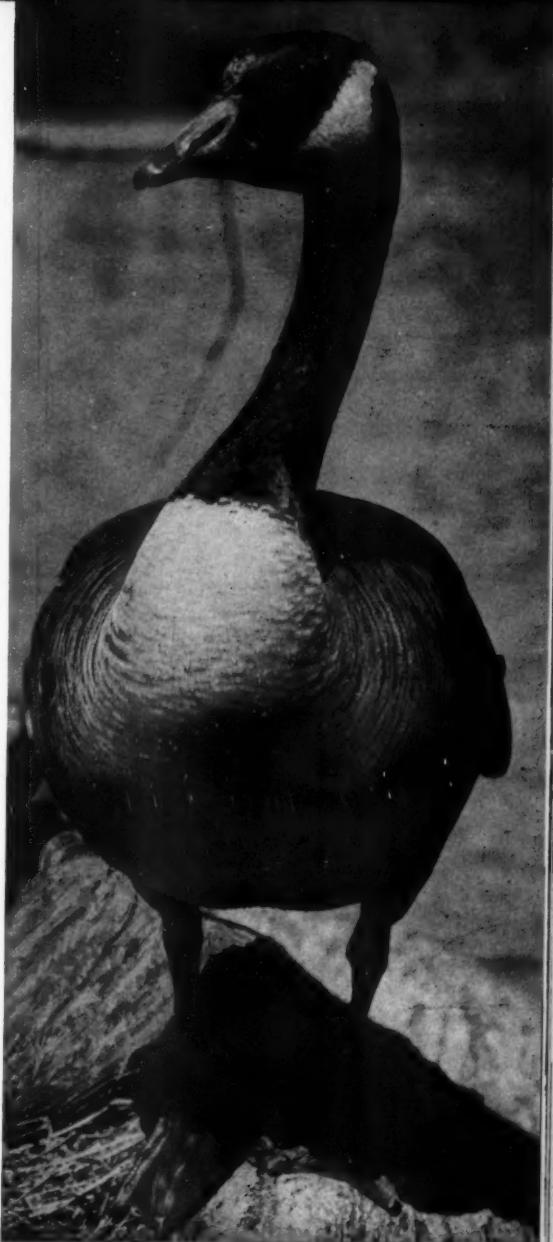
**D**OWN he sailed from the little island of alders, down the still water in the dawn light, his head held proudly like a king. He passed the protective hardwood groves bordering the upper reaches of the mill pond where late summer spread its green and gold. Trailing an undulant ribbon of ripple behind him, the great wild bird moved out into the broad open water and swam smoothly down toward the mill.

He rode sedately into the narrowed mill-race where cultivated lawns reached out from the mill houses. Close by ran the main thoroughfare, sleeping now in deceptive quiet before the bustle of the mid-day traffic. Here in the deep water he stopped and swung about. Then with a lift of his beaked trumpet he sent forth in clarion fanfare a message from deep woods and swamps where partridge drummed and bittern thumped and deer came down to drink the brown and spruce-edged water.

Thus was heralded the sojourn in our city of the lone Canada goose.

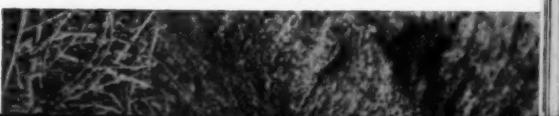
He seemed afraid of nothing. Even in the busiest and noisiest hours of the day he would sail serenely to the edge of the lawn by house or mill and accept with courtly dignity the proffered bits of food. Folkways were quickly learned, the bang of a screen door calling him to dinner. He might be loitering far beyond the alder island, but such a signal always brought him hurrying to the feast.

Within a few days he made repeated visits to the back yards bordering the pond. Here, undaunted by flapping clotheslines, marauding cat, playful child or puppy, he would bask in the sun or



# WILD GOOSE

—By Barbara C. Crocker—





Undaunted by flapping clotheslines in the back yard, the goose made himself a friendly companion of the puppy, and was condescending to the cat

step majestically about, leisurely gathering the bread scattered for him and turning now and then in mild severity to chide the coy advances of the cat.

Then again he would go upon the water, marching down the mid-length of the pond where the insistent music of his trumpet honked resoundingly from shore to shore.

News of this rare guest traveled about the city and many were the audiences held in the small backyards by the clotheslines. His visitors might arrive in a merely curious mood or in the conscious role of bird lover and protector. But always they took away a strangely unaccustomed feeling of humility and awe, a fleeting recollection of something they had once known and had somewhere lost. Returning to the humdrum existence of a round of little duties and dull pleasures, the importance was suddenly gone out of their busy lives at thought of this stately wild creature come so generously among them.

October ushered in a flame of red swamp maples and a new restlessness in all wild things. Any night now might come the flocks of geese following sky paths southward and sending down an invitation to the lone one on the mill pond. But he appeared at ease and unhurried.

One early morning when mist lay in soft patches over the water, the goose swam in a quiet cove by the woods. There a huge owl came upon him, swooping menacingly close and driving him in sudden alarm from the water. The great gray goose circled hesitantly as if questioning the pond's betrayal of its hospitable haven. Then his flight took direction and he flew straightly out of sight over roofs and treetops.

The pond stood empty. Now no kindly wild guest rode over its tranquil surface. Screen doors banged their welcome in vain. The goose was gone.

Neighbors shook their heads. They said sagely that it was time he went, now

that the days were shortening and all wild things were readying for winter. Time he went south with the others.

But the goose still loitered. Only a mile below the pond, it was heard that he now swam on the riverway. Here in the noisy water crowded with flotsam from the mills, nearer and nearer to the thronging highway, he graced the dismal, sullied scene with his august beauty.

Now once more new friends were found among the houses by the stream, more feasts were spread in regular profusion. Up and down the sludge-thickened river he would go, trumping his bold clarion of the wilderness, accenting his staccato honks in full free wing beats as he swept across the water.

Then came the season when man forgets how it feels to be a hunted thing, when the law allows that he may go and forget with a gun. Some say they heard one shot at twilight, one shot by the river bank.

And the goose was seen no more on the river or on the pond.

But next morning before daybreak, high in the darkness over the sleeping city sounded the triumphant chorus of wild geese on their south-going journey. The ring of their clamoring bell-notes beat down on the pond and the river. No answer came to their challenge, no follower trailed their quick flight. Filling the valley with many-voiced music, they called to a comrade too late.

In a heartbeat they were gone. The brave calls faded into emptiness. The valley gave out no sound but the running of the waters below the high hum from the stone mill.

Into the pale morning men came out of the mill from the night shift. They stopped in the yard to light up, exchanging idle pleasantries as they coughed the mill air out of their lungs with coarse and lusty rasps. They had heard no sky music through the persistent din of the machines. Their wearied eyes gave not a glance toward the empty river as they turned away and moved heavily down the road.

*Illustrations from snapshots by the author*



# *A plea for conservation in the*

# WEST

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By James Bond

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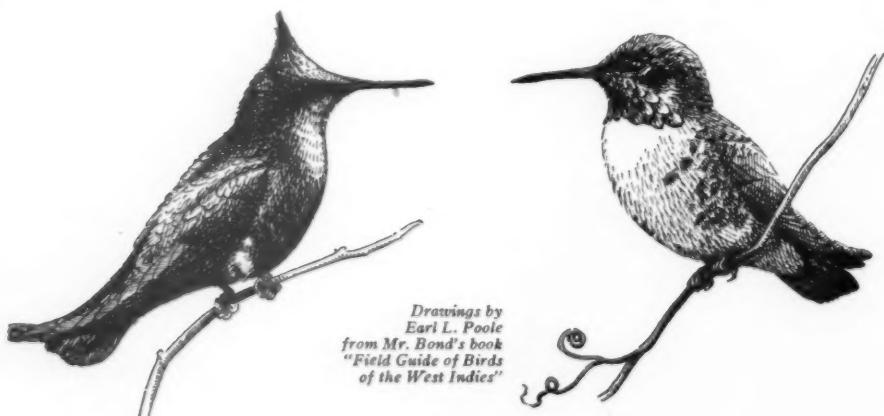
THERE is no part of the New World where more birds are in danger of extinction than in the West Indies. More species and subspecies (approximately 14) have become extinct on these islands within the past 100 years than in entire continental America. This sad condition has been brought about directly or indirectly by man. Members of the parrot family have been wiped out or decimated by shooting and the pet trade; and several terrestrial birds, including certain burrowing owls, nightjars and wrens, have been destroyed by introduced mongooses and rats. African monkeys of the genus *Lasiopyga* have wiped out the St. Kitts bullfinch, and the Cuban ivory-billed woodpecker is almost extinct through deforestation.

Many other West Indian birds are very rare or local and are more or less in danger, for it must be understood that island faunas are extremely vulnerable, and the effects of "civilization" are almost invariably deleterious. We have only to witness what has happened in New Zealand and the Hawaiian Islands,

where many remarkable birds have failed to survive. Even the two native bats of New Zealand have disappeared, possible victims of an epizootic.

In even greater plight than the birds are the terrestrial mammals and the reptiles of the West Indies. Solenodons, strangest of Antillean mammals still extant, have greatly decreased in numbers and are now extremely local in distribution. The same is true in even greater degree of much of the herpetological fauna. Some of the iguanas of the interesting genus *Cyclura* have extraordinarily restricted habitats. We read of one species that is (or was!) found only on a little islet called U Cay, north of High-born Cay in the Bahamas; another whose habitat consists of "two small cays in the salt water lagoon on Watling's Island;" a third, found on the comparatively large island of Grand Cayman, has apparently been reduced in numbers to about 12 individuals. The mongoose is largely responsible for the rarity of the solenodons, and where it has come in contact with the *Cyclura* these lizards

Below, left, Antillean crested hummingbird (Grenada). Right, bee hummingbird.



# INDIES

have failed to survive; but man himself has been the chief cause of the decrease or extinction of these large iguanas, for they are considered excellent as food.

Although we lament the loss of so many West Indian birds in the past, our attention should be directed toward saving those species that are still in existence. I do not think that the situation is beyond control, providing strict measures are taken at once to protect the bird life of these islands. This now comprises nearly 300 native species, and nearly 200 species are known as migrants to the islands from North America. Ducks, shorebirds and wood warblers make up over 50 per cent of the latter element, both in regard to number of species and number of individuals. However, the majority of the shorebirds are transients and pass on to South America for the winter months; and most of the ducks do not travel farther south than Cuba and Hispaniola. Thus the North American migrants, with the exception of the wood warblers, may be regarded as a relatively unimportant part of the West Indian avifauna. Any naturalist who has done extensive field work in this region becomes aware of this fact.

What is, perhaps, not generally realized is that most of the so-called "winter residents" inhabit the islands for almost the entire year. Some individuals of the northern shorebirds remain on the islands throughout the year, showing no inclination to undertake the lengthy journey to their nesting grounds in the Far North, although I have never seen a northern warbler on any of the islands during the month of June. Many ducks, but in particular blue-winged teal, reach the West Indies in late summer before the opening of the hunting season in the United States.



Streamer-tailed  
hummingbird

The bane of the conservationist in this region is the open season on pigeons. These birds are prolific breeders, and the numbers of the common species are not seriously affected by shooting. However, the average West Indian native will not confine his attention to pigeons, but will shoot any other edible bird whether protected or not. I can vouch from personal experience that many a hunter's bag will include parrots and paroquets, even on the British islands where the game laws are fairly well enforced. Again, parrots are often kept in captivity in the West Indies. Among those I have seen in native houses were three of the four Lesser Antillean species, all of which are rare. These captive birds were either taken from the nest when young, or were adults that had been wounded by shot.

Although the widespread white-crowned and scaly-necked pigeons are

still common, their numbers are fewer than in former years. I am sorry to say that the abominable practice of shooting the former species on its nesting grounds still persists. For instance, Green Cay in the Bahamas, where thousands of pigeons nest, was visited every summer by a shooting party before the war. One can imagine the ensuing slaughter!

Two Greater Antillean pigeons, the ring-tailed and plain, have not fared as well. The latter is now believed to be extinct in Puerto Rico and is rare and local in Cuba and Jamaica. Only in parts of Hispaniola is this bird still common, for here it has not been molested

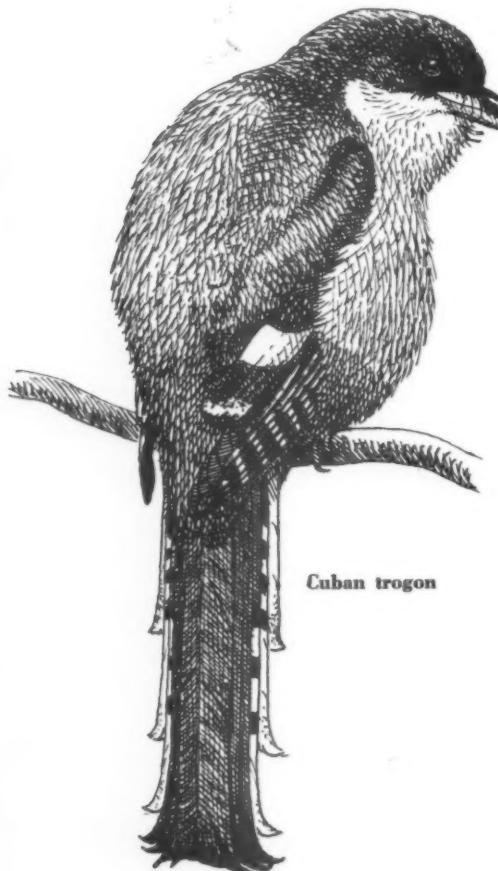
to any extent by man. Both species are relished by the gourmet, since their flesh is tender and succulent.

The majority of bird hunters in the Greater Antilles and Bahama Islands are interested primarily in ducks, of which many thousands are shot annually. Almost all those taken are winter resident, North American species, mainly blue-winged teal. On many islands there is no limit as to the number that can be shot in a day, but in Cuba one is not supposed to shoot more than fifty. Duck hunters do not confine their attention to birds of this family. White ibises, roseate spoonbills, and black-crowned night herons are also killed whenever possible—sometimes even in preference to ducks. Indeed, a passing spoonbill will often cause more excitement than a flock of teal. Since it is likely that individuals of this species reach Cuba from Florida, this might explain the steady decrease of the spoonbill in that state.

I must say that most West Indians shoot their wildfowl in a more sporting manner than many Americans. No decoys or blinds are used, the birds being shot on the wing as they pass up or down the lake or lagoon.

As I have stated, duck shooting affects mainly the migrant North American species. Resident waterfowl are molested by "egggers" who systematically comb the swamps for eggs. This practice is prevalent throughout the Antilles and probably has had some effect on the status of the ruddy duck in this region. The eggs of sea birds, chiefly terns, are collected and are sold as ("booby eggs" in Jamaica) in large quantity without, however, any apparent diminution in numbers of these birds.

On most of the Lesser Antilles there is a dearth of waterfowl, and pigeons are rather scarce and difficult to secure. On these islands doves and shorebirds are popular "game," particularly with the Europeans. At times great numbers of yellow-legs and black-bellied plover are shot and, when these are not available,



the smaller sandpipers. I once was offered an unsavory morsel, which my host proudly informed me was a stilt sandpiper!

Of the various animals brought to the Antilles, the mongoose has certainly caused the most damage and is unques-



At right,  
palm swift  
Below,  
cloud swift

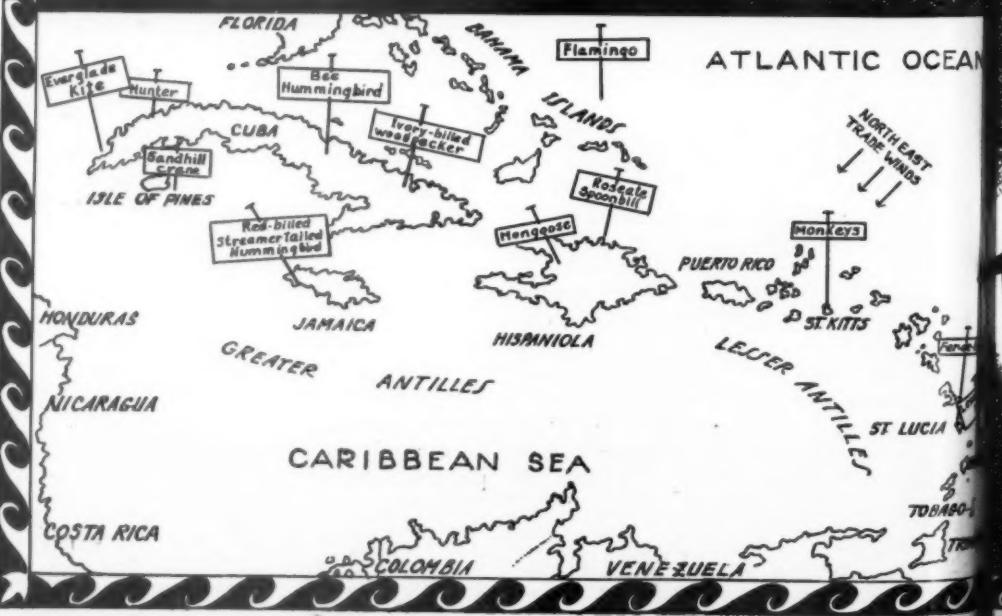
*Drawings by  
Earl L. Poole*



Cuba, where climatic or ecological conditions are evidently unsuited to its needs.

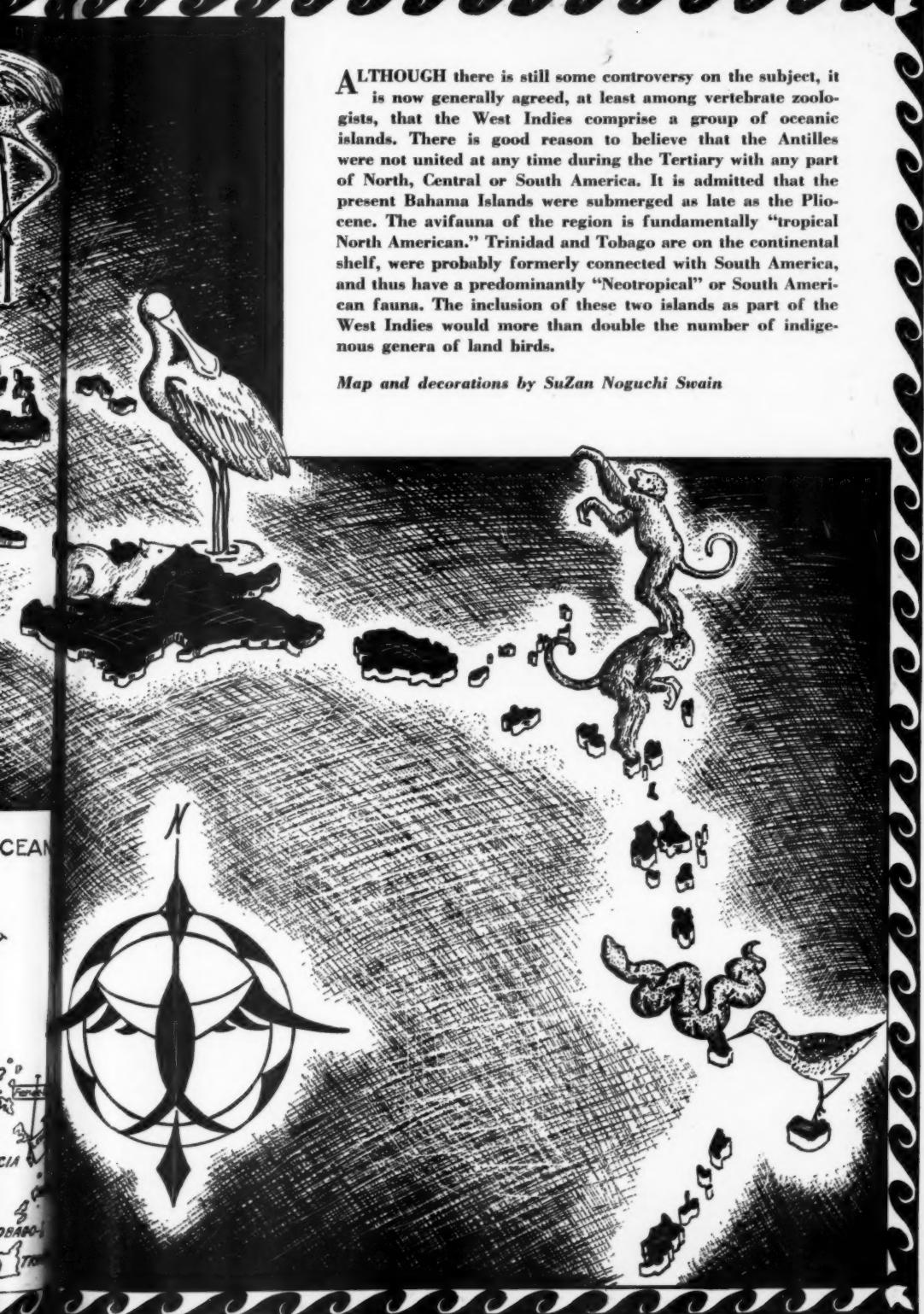
Little can be done to curb the mongoose, but as this is an essentially terrestrial animal only birds that nest on or near the ground are subject to its depredations. Certain species, such as the Lesser Antillean forest thrush, have already learned to build their nests at comparatively high elevations. On the other hand, we can and should do something to protect the parrots and other birds that are threatened directly by man. This is particularly important in the Lesser Antilles. On Guadeloupe and Martinique shooting has been carried on to such an extent that even many of the Passerine birds are rare. The "mauvis" (forest thrush) and "grosse grive" (pearly-eyed thrasher) are particularly sought after. It is not surprising that the parrots and paroquets that once inhabited these islands have long been extinct! The collector who visits the French islands is not subject to restrictions, and he can take as many specimens as he pleases.

tionably responsible for the extinction of a number of terrestrial or semi-terrestrial birds. It was introduced for the purpose of killing the rats and, on Martinique and St. Lucia, the venomous fer-de-lance, but has developed a decided preference for chickens and for wild birds and their eggs. The mongoose is now found on most of the important islands. In Haiti it has been established less than fifteen years, but has increased greatly during this period to the detriment of the wildlife of this republic. Fortunately it has not spread far through



**A**LTHOUGH there is still some controversy on the subject, it is now generally agreed, at least among vertebrate zoologists, that the West Indies comprise a group of oceanic islands. There is good reason to believe that the Antilles were not united at any time during the Tertiary with any part of North, Central or South America. It is admitted that the present Bahama Islands were submerged as late as the Pliocene. The avifauna of the region is fundamentally "tropical North American." Trinidad and Tobago are on the continental shelf, were probably formerly connected with South America, and thus have a predominantly "Neotropical" or South American fauna. The inclusion of these two islands as part of the West Indies would more than double the number of indigenous genera of land birds.

*Map and decorations by SuZan Noguchi Swain*



Some protection has been accorded birds on the British Lesser Antilles, and the game laws are better enforced. Here the "crown lands" of the interior offer a haven of refuge for the rarer species. Nevertheless, it is difficult to prevent native pigeon hunters from trespassing in this area, and I would recommend the use of game wardens to keep the "crown lands" inviolate. Forest rangers employed at present by the island authorities do not appear able to cope with the situation. Primarily, their work is to prevent the natives from felling trees or planting gardens on government land.

I also suggest that the authorities place a ban on the collecting for scientific institutions of specimens of any of the Lesser Antillean parrots and other birds in grave danger of extinction. I well remember the anger I felt on seeing a long series of the imperial parrot, one of the finest parrots in the world, that had been taken by a single collector. Such slaughter is not justified by acquisition of important scientific information and must not be permitted in future. Incidentally, I recently received four specimens of a sparrow hawk from Mona, the collector estimating the total number of individuals on the island at sixteen. On no island in the West Indies is it more difficult to obtain a permit to collect

bird skins than Jamaica. Yet anyone can, with the payment of ten shillings, procure a shooting license!

I do not wish it thought that I am against all future collecting of birds in the West Indies. This is decidedly not the case; but I feel that any ornithologist visiting the islands should take only specimens that are likely to have exceptional scientific value. Thus, a series of skins of the streamer-tailed hummingbird of Jamaica, taken between Kingston and Priestman's River, would be of great taxonomic interest and might prove that the two forms of the genus *Trochilus* inhabiting this island are distinct species rather than geographical races.

In view of our present knowledge of Antillean birds, the collecting of a common North American migrant no longer serves any useful purpose, unless the date or locality is unusual.

The great need in the West Indies is for sanctuaries for the preservation of wildlife. These should be adequately protected by wardens. Such reserves have been created in Puerto Rico with gratifying results. Since the avifauna of the smaller islands is extremely vulnerable, certain birds from the Lesser Antilles and from such islands as Grand Cayman and Mona should receive complete protection, and care should be taken to prevent the importation of exotics that might have a bad effect on the indigenous fauna. My recently published "Check-list of Birds of the West Indies" (1945) gives the approximate status of all the birds of this region and will indicate to the local authorities those forms that are in the most danger of extinction.

Finally, I would advocate that the residents of this region be educated to the point of appreciating the economic and esthetic value of birds, and learn to take pride in the endemic species of their islands. For the responsibility of perpetuating the remarkable fauna of the Antilles rests primarily with the West Indians.

Tree duck  
drawn by  
Earl L. Poole



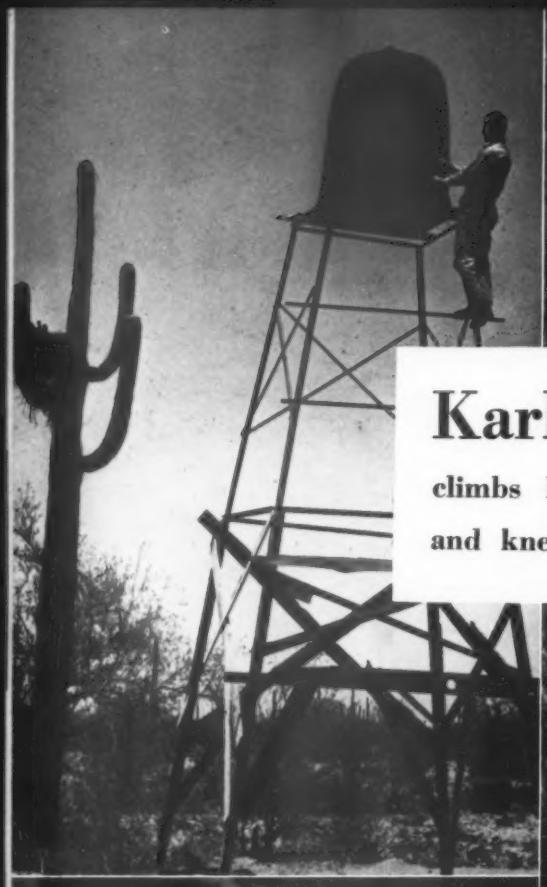


# Making Friends *with* Wildlife

How the experts do it,  
in picture stories about

KARL MASLOWSKI  
HOWARD L. ORIANS  
ALLAN D. CRUICKSHANK

*Photograph by Karl Maslowski*



## Karl MASLOWSKI

climbs high to film a hawk's nest  
and kneels to find a willet in Texas



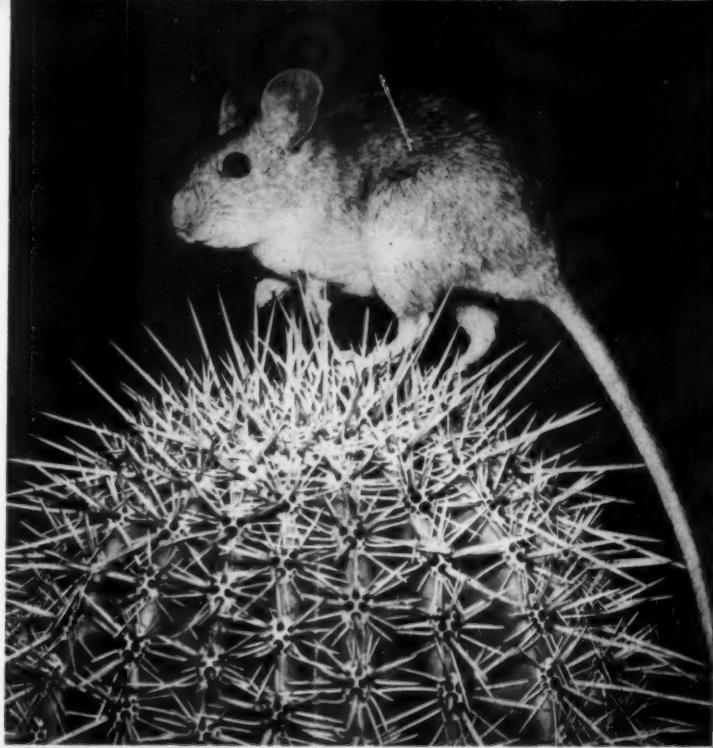
To photograph the hawks in cactus, upper left, Karl Maslowski stood atop an improvised tower. Then he came down to ground level to make friends in the desert. The Gila monster, above, is a venomous lizard but the desert "road runner," at left, became the party's mascot and lunched on the photographer's boot.

"Like an Indian fakir on a bed of spikes," is Maslowski's own comment on his picture of a packrat stepping over cactus thorns.

Below, Petey, the Texas jackrabbit fed with a medicine dropper, seems to be hiding modest blushes but is actually washing his face like a cat.

The monarch butterfly on goldenrod and the Io moth larva on a bean vine, at bottom of page, are happy examples of Maslowski's skill with insects.

Gathering material for his color films "From Seashore to Glacier" and "Our Heritage in the Rockies," and for two other pictures "Saguaronland" and "Beneath Buckeye Skies," Maslowski has traveled from the Florida keys to the western mountains, photographing bighorn sheep, sea birds, beavers and foxes, owls and rattlesnakes. During the war he served as combat cameraman with the AAF in Europe.



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# How HOWARD L. ORIANS shot "Milwaukee Gertie"



When a home-loving mallard made Milwaukee famous by nesting under one of the city's busiest bridges, it was a "natural" for newsmen—but especially for natureman Howard L. Orians, himself a resident of Milwaukee and a specialist in filming wildlife on the Great Lakes. Let others roam afar over seas, mountains and deserts—it is Orians' experience that his own Midwest offers ample scope for brilliant nature reporting, and his motion picture records of Wisconsin wildlife are available to prove it.

Above, Gertie herself sits undisturbed by the admiration of all Milwaukee. At left, Howard L. Orians prepares for a little serious shooting.

**Howard L. Orians sights a bird nesting on land.**  
Below, a spotted sandpiper cleans house, removing from the nest one of its spotted eggshells.

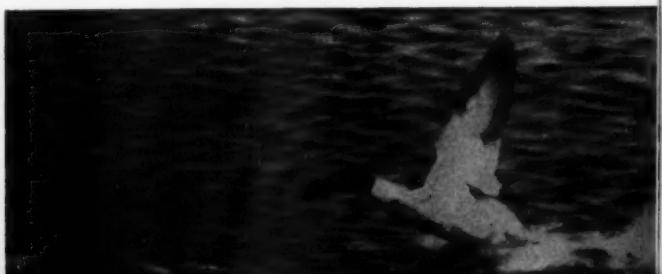
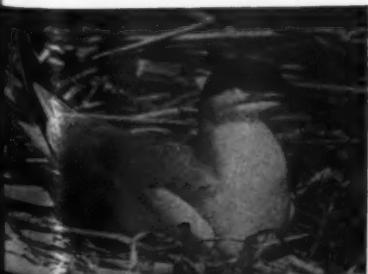


**Below, left, Orians' photograph shows a common tern sitting on nest.  
At right, an American merganser rises from the waters of the lake.**



In "Lakelore," Orians' film study which follows the season through on Lake Michigan, pussywillows and skunk cabbage furnish a background for spring nesting, and summer brings under-water photography with fish and turtles featured. But the real drama comes with the winter days, with the lake icebound and its waterfowl, like the camera man, undismayed by biting winds and lowering skies.

With his son Gordon, another bird enthusiast, Howard L. Orians finds plenty of adventure in making nature films, and he pursues the job with the earnest purpose of a man whose lifework is the ministry. In their way, "Lakelore" and the other film studies are Orians' own picture-sermons, not preaching but praising the beauty of the earth.





*Photograph above  
by Helen Cruickshank*

*At right  
by the author*

# Catching up

**Picture story of an All-American Bird Photographer**

*By Edwin Way Teale*

ON the worn canvas back-pack in which Allan Cruickshank's photographic equipment has ascended cliffs, penetrated into the Everglades and reached wild and lonely spots in many states, three Latin words are printed in ink. They are: *Dum Vivimus Vivamus*. That motto—Let Us Live While We Live—epitomizes the character and outlook of Allan Cruickshank. No one I know is more intensely alive, more vitally interested in life, more contagiously enthusiastic. In the field, when an unusual picture is in the offing, the concentrated intensity with which he works always brings to my mind the image of a benevolent ferret on the trail. For a decade and a half, he has been devoting the resources of an athlete's body and a student's brain to the problems of wild-bird photography. If ornithologists selected ace bird-photographers as sports-



with

# Cruickshank

writers choose star football players, Cruickshank probably would be first on the list for the All-American Team.

The year he graduated from New York University, an outstanding athlete and the man chosen as the most popular and the best all-around student in the senior class, Allan Cruickshank left college with a unique ambition. His more conventional classmates wanted to be millionaires and college presidents. His goal was to become the first man on earth to photograph, in their natural surroundings, every one of the more than seven hundred species of wild birds found in the United States.

Today, he is well beyond the half-way mark. His negatives, numbering between 30,000 and 40,000, represent more than 400 species of birds—360 of them up to the rigid "Cruickshank standard." The first of these tens of thousands of pictures was made with a folding kodak and a portrait attachment in a swamp near Van Cortlandt Park, in New York City. As a schoolboy, Allan discovered in this swamp the second king rail's nest reported from eastern New York state. He borrowed his father's camera to photograph it and succeeded in getting a good picture of both nest and bird in this first of his wildlife photographs. The latest species added to his list was a seaside sparrow captured on film near Jones Inlet, on Long Island.

Between those two exposures, he has been afield in nearly every state in the Union. Year by year, scaling cliffs, climbing trees, crouching in swamps, spending days in blinds waiting for some shy bird's approach, Cruickshank has added negative by negative to one of the world's great collections of bird photographs. He has traveled with his camera



Photographer with subject — young osprey

more than a quarter of a million miles. His subjects have ranged from thumb-sized hummingbirds to condors with a wing-spread of eleven feet. Many of his pictures are remarkable closeups in which every feather is distinct. Allan Cruickshank is a portrait photographer whose studio is the whole outdoors.

The pictures that have resulted from these labors have appeared in innumerable newspapers and magazines both here and abroad. They have been reproduced in advertisements, on billboards, in encyclopedias, on pictorial calendars. Artists have used them as models. The USS *Kittiwake*, a submarine rescue vessel, has its ward room adorned with an enlarged Cruickshank picture of its namesake. The dust-jackets of numerous books have been decorated with his photographs and a half hundred volumes—including *Bird Islands Down East*, his wife's charming account of bird-life off the New England coast—

have used his photographs for illustrations. One Cruickshank picture even appeared in a mathematics textbook.

Yet, it was not until this fall that a complete volume gave adequate display to Allan Cruickshank's photographs. Issued by the Oxford University Press, *Wings in the Wilderness* reproduces beautifully and in large size 125 of his best pictures. An extended caption by Cruickshank accompanies each photograph. This volume is already one of the outstanding nature books of the

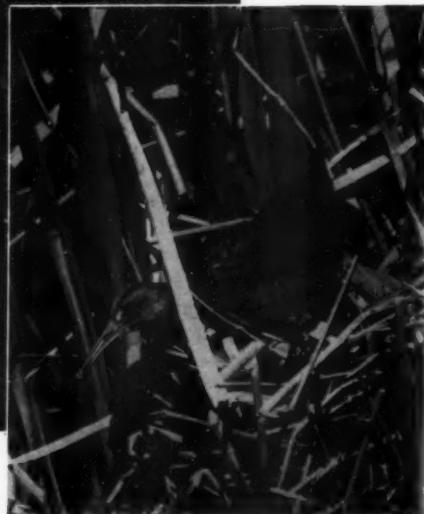
year. A decade and a half separate the taking of the first and the latest photograph included in this volume. Curiously enough, both these pictures are of barn owls. They appear on succeeding pages. The flash-shot of the barn owl at the nest was made in April 1932, the picture of the owl in the hollow tree in December 1946.

Cruickshank is also author of *Birds Around New York City*, a standard guide of nearly 500 pages telling where and when to find various birds of the

**Cruickshank bogs down — to photograph marsh birds on their nests**



**Virginia  
rail by  
Cruickshank**



**Cruickshank  
by Teale**

Cedar  
waxwing  
feeds the  
family —  
Cruickshank



Cruickshank up a tree — focusing for a famous family portrait

region. This volume was published in 1942 by the American Museum of Natural History. For a year after his graduation from college, Cruickshank worked in the ornithology department of this noted institution helping organize the 280,000 bird-skins of the great Rothschild Collection which the museum had just acquired.

It was a screech owl perched in a willow tree on Twenty-third Street, in New York City, that first aroused Cruickshank's interest in birds. He was a small child at the time. He was still in high school when he contributed an article on the courtship of the brown creeper to the National Audubon Society's *Bird-Lore Magazine*, an article that brought

him a letter from the eminent English scientist, Julian Huxley. In 1926, when he was a senior in Evander Childs High School, he invested all his summer's earnings in a 4x5 Graflex camera. With that purchase, his career as a bird photographer really began.

Cruickshank still speaks of that first camera with affectionate regard. And well he might. It shared his adventures for years and traveled with him tens of thousands of miles. At least a dozen times, the two came plummeting down out of trees together when branches snapped. Cruickshank practices gymnastics and tumbling to prepare for such emergencies. Once he turned a complete somersault in the air and landed on his



Cruickshank in the tall grass gets ready to make a camera report on the least tern



feet when a branch snapped in a chestnut tree fifteen feet from the ground.

Only once has he broken bones in a fall. That was a few years ago at the Audubon Nature Camp in Maine, where Allan is head instructor in birds each summer. At the top of a fifty-foot white pine, he was photographing young ospreys in the nest. Both of the parent birds dived at him almost simultaneously. He dodged, shifting his weight, and the limb snapped off at the trunk. Clutching his camera, he crashed downward from branch to branch, reaching the ground with two cracked ribs.

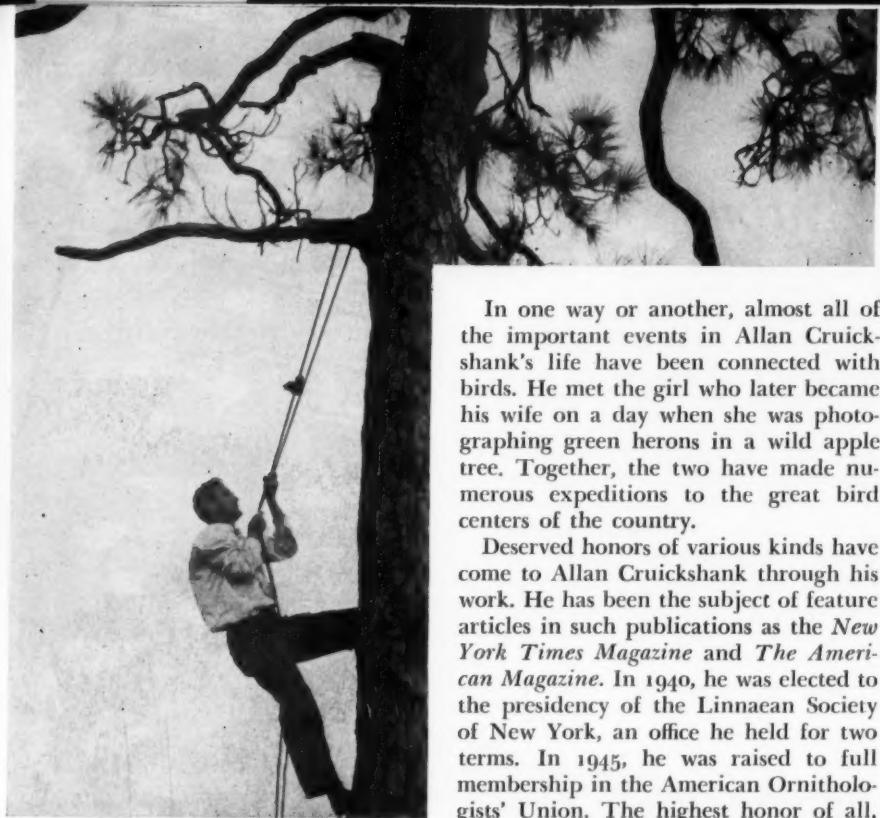
His Graflex survived that fall unhurt. But a drop into a ravine at the Palisades—fortunately unaccompanied by its owner—sent it to a camera hospital. After it had recorded more than 200 species of birds, Cruickshank regretfully turned it in on a similar camera of advanced design. Besides this Graflex, he also uses a 4x5 Speed-Graphic. For his moving picture work, which has been receiving increased attention, he employs a Bell and Howell 70DA.

Since October 1935, Cruickshank has been an official lecturer for the National Audubon Society. He has given more

than 4000 lectures in 2500 cities and towns in 38 states of the Union. More than 1,000,000 persons have seen his movies and heard him speak. His ready wit, his ability at story-telling, his skill in imitating bird-calls, all these aid him in his lecture work.

He can imitate the songs and calls of a half hundred species of birds. An amusing article once appeared in the *New Yorker* magazine about a group of earnest bird-watchers who trailed him through Central Park under the impression that they were following an unusually early rose-breasted grosbeak. During his first summer at the Audubon Nature Camp, Allan used to imitate bird calls to wake up the campers in the morning. Later he substituted an accordion. This change was caused by the embarrassment of two ladies from Brooklyn. They heard a real bird at 4:30 A.M. and, thinking it was the Cruickshank reveille, hurriedly dressed and came down to a dark and silent dining hall.

Cruickshank's latest movie, based on a trip down the Suwannee River, was shown more than 350 times last season. It was filmed in the spring of 1946 after he returned to the United States from two year's service in Europe with the news section of the U. S. Army Pictorial Service, a branch of the Signal Corps. He



Cruickshank climbs a pine

was stationed in London during both the buzz-bomb and the V-2 bombardments. Once a V-2 hit so close to his headquarters he was knocked off a windowsill. During his stay in Europe, he added more than 200 new birds to his life-list of species seen—a list that now totals well over 1000. In a London park he once talked to a fellow birder and discovered he was the Right-Honorable Anthony Eden. Before Cruickshank returned to America, he had a chance to see birds in France, Belgium and Holland as well as in all parts of the British Isles. One of the oddest sights was a flamingo calmly feeding on a sandbar in the wild Scilly Isles at the southern tip of England. In Scotland, home of his ancestors, he discovered that Cruickshank, appropriately enough, is the name of a bird.

In one way or another, almost all of the important events in Allan Cruickshank's life have been connected with birds. He met the girl who later became his wife on a day when she was photographing green herons in a wild apple tree. Together, the two have made numerous expeditions to the great bird centers of the country.

Deserved honors of various kinds have come to Allan Cruickshank through his work. He has been the subject of feature articles in such publications as the *New York Times Magazine* and *The American Magazine*. In 1940, he was elected to the presidency of the Linnaean Society of New York, an office he held for two terms. In 1945, he was raised to full membership in the American Ornithologists' Union. The highest honor of all, however, is due early next year. Recently Cruickshank received notification that he had been selected for that extremely limited group—men who have become sufficiently eminent in the field of bird-study for inclusion in the forthcoming "Who's Who in America."



# "Anthus Campestris is breeding in Lipsbury Lea!"



176 A PRACTICAL HANDBOOK OF NATURE STUDY  
taken in winter-quarters (Legge). Insets on right hand to  
show:

Dunlin.—British Isles.—Vagrant. Over eighty recorded  
in various parts Scotland, but chiefly in easternmost coast, eight in  
Norfolk. In Shetland, one early April; Kirkwall, August, and  
Jubilee, several instances. 1906, one Scapa, Oct. 26, 1906, two Oct. 6,  
1911, and one Oct. 2, 1912. Fair Isle, 1906, one Lomond  
(Dykles) Nov. 21, 1907. One Haven (Dykles) Oct. 22, 1911.

Dunlin.—Abroad.—North Africa. Migrant, wintering in  
tropical India and south China, and frequently occurring there;  
also in Europe, and Mediterranean countries. An allied species  
lives in west Mongolia and China south to Hindoo-koo and  
Koko Hill.

#### *ANTHUS CAMPESTRIS*

••• *Anthus campestris (L.)—THE TAWNY PIPIT.*  
"Anthus campestris (L.)—The Tawny Pipit."—  
"Handbuch der Ornithologie," Vol. II, p. 166 (1904).

DESCRIPTION.—Adult male.—Tawny brown above, and  
slightly whitish below. Wings.—Feathers and  
tail-coverts greyish; primaries and  
secondaries dusky brown, blackish at base; outer  
feathers with only very faint traces  
of dusky wash; inner feathers with  
dusky wash at base; tail-coverts  
blackish brown, with a few white  
interspersed feathers; white  
interspersed feathers in white  
tail-coverts, and blackish brown  
interspersed feathers in blackish brown  
tail-coverts.

Tawny Pipit (Anthus campestris).—  
"Handbuch der Ornithologie," Vol. II, p. 166 (1904).

DISTRIBUTION.—British Isles.—Thirty or more in past fifty years  
in autumn on Sussex coast, where Mr. M. J. Nicoll in 1904 con-  
sidered it an annual visitor, and had evidence that a pair bred  
1905, and again possibly 1906. Elsewhere very rare straggler—  
one Scilly Isles, Sept. 1868; one Yorks., Nov. 20, 1869; one Hants.,

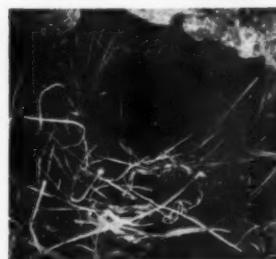
Nov. 1870; another seen near Newhaven, 1880; one Yorks., Jan. 1881;

one Hants., Jan. 1882; one Yorks., Jan. 1883; one Yorks., Jan. 1884;

one Hants., Jan. 1885; one Yorks., Jan. 1886.

Was it really  
*Anthus Campestris*,  
the  
tawny pipit—  
as rare a visitor to England  
as the bird  
book said?

Or was the  
common meadow pipit a  
"stand-in"?



Pictures of *Anthus Campestris* are rare  
in this country—so rare that photo-  
graphs by Gayle Pickwell show the  
American water pipit and nest. Motion  
picture stills courtesy Prestige Pictures.

# *Starring* Mr. and Mrs. Pipit

*A British motion picture producer discovers that birds are photogenic. New York critics rave over "Tawny Pipit"*



**T**HIS is a feature film to make screen history. A story that stars a pair of birds and extols bird-watching has become a hit in London and New York. Why not ask your local movie house to show it in your town? If "Tawny Pipit" could become a real box-office success, surely it would be the forerunner of others of its kind. If you come to New York City before December 1, you can see it at the Little Carnegie, 156 West 57 Street.

**T**HE startling message that ANTHUS CAMPESTRIS IS BREEDING IN LIPSBURY LEA threw the meeting of the Royal Society of British Ornithologists into an uproar, and a group of members immediately laid plans to hasten to the village where they could see the pair of nesting tawny pipits for themselves. You can imagine what a thrill ran through the gathering, since the tawny pipit had been recorded as nesting in England only once or twice before in history!

But the people of Lipsbury Lea had become fiercely protective of the "friendly aliens" nesting in their midst. Since these little strangers had sought refuge in their countryside, the villagers became united in the determination that the brood should be brought off the nest successfully, and in this situation they found symbolized all the British virtues of fair play and patriotism. So when the learned, but unknown, scientists arrived on the scene, they were given the run-around and even locked up for awhile!

Of course, the tawny pipits do bring off their brood in due time, but not until a maneuvering tank corps, a farmer ordered by law to plow his field, and a dastardly oölogist who tried to steal the eggs, are circumvented. (*Produced by J. Arthur Rank*)





White-breasted nuthatch, by Allan Brooks

ONE day a young school-teacher (a man who has since become famous) found a picture of a white-breasted nuthatch and it changed all his life that followed after. He had grown up in a rural community where birds were a common sight, but never saw one. That is, he never looked at any particular bird, never discovered that one bird was different from another. Birds were just birds, and they moved so fast that they all looked alike to him. However, there was something about this portrait of the nuthatch which lingered in his mind.

According to the caption, the bird was a common one in the region where the young man lived. Next morning, on his way to the schoolhouse, the first thing he saw was a sprightly gray and white bird with a sharp bill and stubby tail. Why, it was a white-breasted nuthatch! As a matter of fact, he saw a half dozen of those birds before he reached school. The countryside seemed alive with them, but it had taken an artist's picture to open his eyes.

The young man was John Kieran, and since then he has identified more than 400 birds. They have led him into a richer world of the out-of-doors, and

## BIRD ART

broadened his point of view so that today he is an earnest worker for the cause of conservation in America and throughout the world!

Who knows how many people have suddenly been able to see the living world about them because an artist showed them the way?

Who knows how many people in years to come will be inspired by an artist's painting and, like Alice stepping through the looking glass, enter a delightful new world?

Bird art as art needs no justification. It is worthwhile as art whether or not the beholder looks through and beyond it to the living form. Yet we know that art has great influence and that the stroke of Audubon's brush is a living part of the great conservation movement that is today known as the National Audubon Society.

For years the Society has encouraged artists by exhibiting their paintings, by purchasing their work, by reproducing it in various publications, especially in Junior Club leaflets. And now, at last,

Mexican curassow by George Miksch Sutton



# for Everybody

we have achieved a long cherished dream in assembling, in exhibition form, the superb original paintings of a number of famous artists. Most of these paintings are the Society's own property and include representative works of Louis Agassiz Fuertes, Allan Brooks and Bruce Horsfall. Particularly impressive are the exhibitions which contain the 37 original Brooks paintings that illustrate the

**Sea swallows by Roger Tory Peterson**



book "The Hawks of North America" and the 24 originals that were used as illustrations in Chapman's "The Warblers of North America."

Some exhibitions have been graciously loaned to us by such nationally famous artists as Athos Menaboni, Roger Tory



**Kingfishers, painted by Athos Menaboni**

Peterson and George Miksch Sutton.

The exhibitions vary in size, each one containing from 20 to 40 originals. A substantial initial outlay of money was required to have the paintings matted, framed and labeled, and to build special shipping cases so that they can be sent with safety anywhere in the country. Each set of pictures is insured under a blanket policy so that no local sponsor has to worry with this kind of detail. These exhibitions, called Audubon Art Tours, are available on a contribution basis.

It is our hope that many local groups throughout the country will be able to sponsor the Audubon Art Tours and thus make available, for the first time in history, this magnificent bird art to the thousands of people already interested in birds and to the school children and general public who may now begin to see birds for the first time.

—ELEANOR A. KING

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# BOOK REVIEWS

By Richard H. Pough

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## WINGS IN THE WILDERNESS

By Allan D. Cruickshank, Oxford University Press, New York, N. Y., 1947. 8½ x 10¼ inches, 260 pages, 125 photographs. \$6.00.

Here are what Mr. Cruickshank considers to be the best 125 photographs from among the many thousands he has taken. They are beautifully reproduced in sepia, one to a page in an 8 x 10 format, with a short paragraph about the bird on the facing page. The readers of *Audubon Magazine* hardly need to be told that these pictures are things of exquisite beauty and the book itself is a real work of art. The subjects range from the familiar house wren and mockingbird to brown pelicans, godwits and the gannets of Bonaventure Island. Full photographic data on each picture is provided in an appendix.

## OUR FLOWERING WORLD

By Rutherford Platt, Dodd, Mead & Company, N. Y., 1947. 7 x 10 inches, 278 pages, 168 photographs (38 in color). \$6.00.

Mr. Platt has a real knack for taking technical subjects and putting them into clear, simple language for the layman. Those who remember the fine job he did in "This Green World" will welcome this volume on the history of plant life. It deals with the evolution of modern plants, the history of their spread from points of origin and the geological forces that played a part. The fine photographs, many in color, and the constant references back to familiar modern plants and landscapes, keep the book from becoming dull for even a moment.

## BIRDS OF THE DAY

By E. J. Hosking and C. W. Newberry, William Collins Sons & Co., Ltd., 14 St. James's Place, London, 1944. 8½ x 10½ inches, 128 pages, 78 photographs, 12s. 6d.

Those who have Mr. Cruickshank's fine book of photographs of American birds will be interested in this rather comparable book by two of Great Britain's leading bird photographers. The pictures are excellent, but were mostly taken at or about the bird's nest; the easiest place to photograph birds, but one that makes for a certain lack of variety. The fairly extensive text deals largely with the photographers' personal experiences with the thirty-nine species portrayed.

## CANADIAN SPRING

By Florence P. Jaques, Harper & Brothers, New York, N. Y., 1947. 6½ x 8¾ inches, 216 pages, illustrated by F. Lee Jaques. \$3.50.

The vast duck marshes and wetlands of the Prairie Provinces, the rugged Canadian Rockies beyond and the edge of the great northern wilderness are the locale of this fascinating travelog by the Jaques, whose collaboration has produced such outstanding books as "Snowshoe Country," which won the John Burroughs award for 1946. It is full of birds and animals, scenery and people, and of the flavor of this big country that is still so close to the edge of civilization. The book is illustrated with an abundance of Lee Jacques' beautiful scratchboard drawings and is worth buying just to get them.

## WALDEN OR LIFE IN THE WOODS

By Henry D. Thoreau with an introduction and comments by Edwin Way Teale, Dodd, Mead & Co., New York, N. Y., 1946. 7 x 10 inches, 386 pages, 142 photographs by Edwin Way Teale. \$5.00.

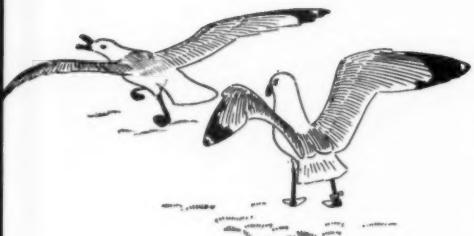
Walden is, undoubtedly, one of the greatest books ever produced by an American. It has appeared in some fifty editions (of which this one with its fine photographs is certainly one of the most attractive) and has been translated into many languages. Any naturalist who has not read it and does not treasure a copy in his library is depriving himself of one of the greatest pleasures imaginable—that of sharing the thoughts of a man who was not only a great philosopher, but one of the most gifted of nature writers. The amateur naturalist of today finds in Thoreau a kindred spirit who could put into words what every naturalist feels about his hobby.

## WILD WINGS

By J. J. Murray, John Knox Press, Richmond, Va., 1947. 6½ x 9½ inches, 123 pages, illustrated. \$2.50.

This is a series of some 40 short accounts of memorable bird trips. Many were to the woods and fields near the author's home in Lexington, Virginia. Others took him farther afield to some of the notable birding spots in America and Europe. Dr. Murray is a keen observer and a well-informed naturalist. A vicarious bird trip in his company is a rare treat.





#### THE BIRDS OF BREWERY CREEK

By Malcolm MacDonald, Oxford University Press, New York, N. Y., 1947. 6½ x 9¼ inches, 334 pages, 23 photographs—7 in color. \$5.00.

If you wish to do a bit of fireside birding some winter evening, here is your chance. Your guide is a prominent British statesman, son of the late Prime Minister. The environs of Ottawa, Canada, where Mr. MacDonald recently served as High Commissioner for the United Kingdom, are the locale. The account carries one through a full calendar year with the birds, and the author reveals himself to be a skilled amateur with both an observing eye and a mind well stocked with ornithological knowledge.

#### TOMORROW'S A HOLIDAY

By Arthur Loveridge, Harper and Brothers, New York, N. Y., 1947. 5¾ x 8½ inches, 278 pages. \$3.00.

This is a book of outdoor adventure in Africa's Tanganyika Territory. Mr. Loveridge, a member of the staff of the M.C.Z., at Harvard, is a keen observer and a good all-round naturalist and story teller. His specialty is reptiles and amphibians but on this trip he encountered wildlife of every sort and many fascinating human characters as well. In fact, a large part of the book deals with his experiences with various native tribes.

#### AN AMERICAN YEAR—COUNTRY LIFE AND LANDSCAPES THROUGH THE SEASONS

By Hal Borland, Simon and Schuster, New York, 1946. 6½ x 8¾ inches, 200 pages, 50 illustrations. \$3.50.

This book is a collection of short sketches about various aspects of the American countryside, the changing seasons and the human activities incidental to farm and country life. Some will be recognized as having appeared already on the editorial page of the *New York Times*. They are all superb almost poetic word pictures done in a quiet nostalgic mood. Each of the fifty etchings, lithographs and wood cuts which illustrate the volume are by an outstanding contemporary American artist. A thoroughly delightful book.

Ludlow Griscom, Chairman of the Board of Directors of the National Audubon Society, has very kindly consented to comment at some length on the long awaited new edition of the Peterson Field Guide—one of the classics of ornithological literature:

#### A FIELD GUIDE TO THE BIRDS—Eastern Land and Water Birds, 2nd revised and enlarged edition, sponsored by the National Audubon Society.

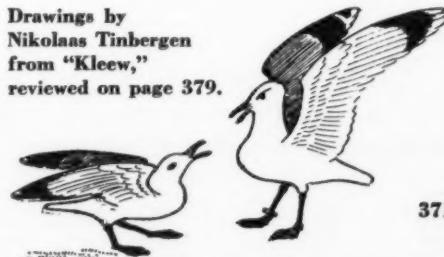
By Roger Tory Peterson, Houghton Mifflin Company, Boston, Mass., 1947. 4½ x 7½ inches, 290 pages, 60 plates (36 in color), numerous line drawings and end papers of "roadside" and "flight" silhouettes. \$3.50

After delays and setbacks, now apparently inevitable in the publishing business, the long and eagerly awaited second revised and enlarged edition of Peterson's famous Eastern Guide, finally appeared in June, 1947. I fell upon the first copy that reached my desk like a famished wolf and devoured it at one sitting, only to discover that it took weeks of rereading and reflection properly to digest and appraise the rich bill of fare in the contents. Recalling vividly, as I do, everyone's satisfaction over the changes in the first revised edition of 1939, the degree of improvement in this present book seems almost incredible, and the reviewer must attempt to explain it.

In the first place 40 plates have become 60, of which 36 instead of 4 are in color. Practically everything has been redrawn including the line illustrations, and all greatly improved. There is a plate of "Florida specialties" two of "confusing" fall warblers, one of "ground birds of open country;" the illustrations for ducks, shorebirds, gulls, terns and hawks have about doubled. A master stroke is a page of captions, facing each plate, giving the diagnostic points for the reader to notice.

The more serious student of birds will, however, not stress the plates too much. The improvement and enlargement of the text is even more important. 180 pages have become 290. The old paragraph entitled "Description" has been expanded into two, "Field Marks" and "Similar Species." Gone is the oversimplification of the first editions; our native birds now have winter and immature plumages, many of which are difficult, confusing and definitely not recognized at a glance by the expert. The student has no excuse

Drawings by  
Nikolaas Tinbergen  
from "Kleew,"  
reviewed on page 379.



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left for seeing Arctic terns south of New England or Louisiana water-thrushes in northern New England; I am personally relieved to see that the prairie warbler wags its tail after all. A few new birds have been written up by specialists who were permitted to sign these entries, thus continuing a custom originally begun by Frank Chapman in his Handbook. Mr. Peterson tries to suggest that nearly 100 people deserve credit for improvements, a generosity which is typical of him, but I have noticed that it is the able, the gifted and the competent who can afford to admit that they do not know all about everything, who are open to suggestions, and who can afford to praise others.

There are two appendices. Following his Western Guide, our author puts all the subspecies at the end, discussing those which are distinguishable in life. The accidental stragglers are also taken out of the main text, and are divided into groups: oceanic, West Indian and tropical, European, and western. These are most commendable features which, it is hoped, will reduce the unfortunate craze of many observers to specialize in sight records of birds belonging to these two categories.

A word of praise is due the publishers, who spared no pains to bring out a creditable volume at a relatively low price, and to do justice to their gifted author-artist. I hear they rejected most of the first printing of the colored plates.

The printing of the black and white plates is superlative, in marked contrast with the first edition. Color plate work in very large editions is exceedingly tricky, and it is quite impossible for all copies of every plate to be equally brilliant and clear. In my copy the ducks are too pale, the sparrows too black, and three of the shorebirds do not have enough red. But most of them are splendid, and several extraordinary, like the difficult thrushes and the varying shades of green and yellow in the fall warblers.

Presumably every student of birds in North America must buy this book for decades to come. This will be the reward that author, artist and publisher richly deserve.

### AUDUBON BIRDS

With Notes by Donald A. Shelley, Hastings House, New York, N. Y., 1946. 5 x 6 3/4 inches, 40 pages, 16 color plates. \$1.00.

The New York Historical Society owns almost all of John James Audubon's original water-color paintings from which Robert Havell of London made the 435 engravings which were then hand-colored for the Elephant Folio. Here sixteen of these originals are reproduced in full color with a page of text taken from the account about the bird in the "Ornithological Biography" which Audubon wrote to accompany the "Birds of America." This little booklet closes with an excellent eight-page biography of Audubon's life.

## GARDEN BIRDS

By Phyllis Barclay-Smith, King-Penguin Books, London, England, 1946. 5 x 7½ inches, 35 pages, and 20 full page color plates by Gould. 25.

The names of Britain's common garden birds are so familiar to us from the classics of English literature that it is nice to know what they look like. The twenty beautiful color plates in this book were taken from John Gould's famous book, "The Birds of Great Britain," and serve as an excellent introduction to nineteen of the commoner species. The brief text tells a little about each species and there is a short preface on attracting birds to gardens.

## BIRDS OF CENTRAL PARK

By Geoffrey Carleton, The American Museum of Natural History, New York, N. Y., 1947. 7 x 10 inches, 29 pages, with map, paper covers. 25¢.

Central Park in the center of Manhattan Island is a place of unusual ornithological interest. Spring and fall it catches the many hundreds of night migrants that find themselves over the city when day breaks. This produces a concentration in the Park's 843 acres of shrubby tangles, woodlands, lawns and ponds far higher than one ordinarily gets in the open countryside. Furthermore, its paucity of resident birdlife permits accurate determination of the earliest and latest days of migratory movement. These dates are well brought out in this annotated list which includes a table of relative abundance of the different warblers during the fall migration, based on a five-year count.

## LIFE HISTORIES OF NORTH AMERICAN GULLS AND TERNS

By A. C. Bent, Dodd, Mead & Company, New York, N. Y., 1947. 6½ x 9½ inches, 333 pages. \$5.00.

Here is the second in the Bent life histories reprint series. It is identical with the original that was issued by the United States National Museum in 1921, except that it is not illustrated. The original had 77 plates of black and white photographs and 16 color plates of eggs, the inclusion of which would probably have made the price of this reprint prohibitively high.

## ORNITHOLOGY LABORATORY NOTEBOOK—FIFTH EDITION

By Arthur A. Allen, Comstock Publishing Company, Ithaca, N. Y., 1947. 8½ x 10¾ inches, 256 pages. \$4.00.

This new edition has been expanded to make it more usable throughout all of North America. It is not intended as a book about birds, as it is

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largely just a series of blank forms to be used by a student to record the data obtained during a course in ornithology. Actually it does have a useful bibliography, keys to bird orders and families, a key to bird nests of the Northeast and a brief summary of summer and winter ranges.

### HOW TO DISAPPEAR FOR AN HOUR

By Geoffrey T. Hellman, Dodd, Mead & Company, New York, N. Y., 1947. 5½ x 8¼ inches, 272 pages, illustrations by Steinberg. \$3.00.

This is a collection of some 37 humorous sketches dealing with almost every aspect of modern life. Most have appeared at one time or another in the *New Yorker Magazine*. About 100 pages are devoted to a section called "Birds of a Feather," which consists of very amusingly written, tongue-in-cheek biographies by Frank Chapman, Jean Delacour and Gilbert Grosvenor.

### FEDERAL DUCK STAMPS—AND THEIR PLACE IN WATERFOWL CONSERVATION

By Edna N. Sater, U.S. Government Printing Office, Washington, D. C., 1947. 7¾ x 9¾ inches, 14 pages, illustrated. 15¢.

This is a combination of a booklet on duck stamps with pictures of each and full data on their production and an account of the waterfowl crisis of the '30s and the part played by the Duck Stamp Act in setting in motion machinery to preserve and expand duck habitats.

### CROW SHOOTING

By Bert Popowski, A. S. Barnes and Company, New York, N. Y., 1946. 6¼ x 9½ inches, 216 pages, illustrated. \$2.50.

There is no doubt but that the common crow is one of the most interesting birds in America and one we don't know nearly enough about. Although no naturalist can agree with the author's attitude towards the crow, he has learned a lot about their behavior. It seems too bad that if crows are to be hunted for sport, it can't be done without all the absurd nonsense about how wicked they are.

### PARKER RIVER—A NATIONAL WILDLIFE REFUGE

By Rachel L. Carson, U.S. Government Printing Office, Washington, D. C., 1947. 7¾ x 9¾ inches, 14 pages, illustrated. 15¢.

This attractive booklet, Number Two in the U. S. Fish and Wildlife Service's new series, "Conservation in Action," is very timely in view of the unfortunate controversy that has arisen over this area. The case for the refuge and the benefits that can be expected from its establishment are well set forth. It should set at rest any opposition

from those public spirited enough to see the issue in its proper perspective.

#### JACK MINER AND THE BIRDS—SOME THINGS I KNOW ABOUT NATURE

By Jack Miner, *The Reilly & Lee Co., Chicago, Ill., 1947. 6½ x 9½ inches, 303 pages, illustrated. \$3.50.*

This is a new edition of Jack Miner's writings and includes many of his magazine articles. That Jack Miner was quite a character goes without saying. To what degree he could be called a naturalist and to what degree he contributed significantly to the conservation movement in North America can best be judged from his writings. He was certainly no believer in the inherent rightness of nature and natural processes and unfortunately his scheme of concentrating enormous numbers of geese in a small sanctuary has boomeranged rather badly in recent years.

#### LAS AVES DE CHILE—VOLUME I

By J. D. Goodall, A. W. Johnson and R. A. Philippi B. Published by the authors. Sold by Katz, Johnson, & Co., Ltd., Santiago, Chile, 1946. 6½ x 9¼ inches, 358 pages, 48 color plates, plus many photographs. \$5.00.

This first volume covers the 202 land birds of Chile from pigeons to finches. It is to be followed by a second volume that will complete the coverage of all species known from that country. It is a popular handbook of the best type, simple and readable yet thoroughly accurate and scientific—the first one to appear on the birds of any South American country. The color plates have been selected so that they serve as a basis for comparison with related species that could not be portrayed. The text includes the range and description of each species, followed by a page or two of general discussion. All in all, an excellent book.

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## MAMMALS

### WILD ANIMALS OF THE FIVE RIVERS COUNTRY

By George C. Franklin, Houghton Mifflin Company, Boston, Mass., 1947. 5½ x 8½ inches, 271 pages, illustrated. \$2.50.

The Five Rivers country lies in southern Colorado and northern New Mexico. Here, Mr. Franklin as a boy came to know the animals about which he writes. Each of the eighteen chapters tells the story of an animal character of a different species. The accounts are well and interestingly written and deal with a series of dramatic episodes in the life of an animal which became involved in some way with man—in quite a number of cases as a pet. In order to make a complete story, the author tries to imagine what the animals' reactions were to the situations and what motivated their actions.

### WILD MAMMALS OF VIRGINIA

By C. O. Handley, Jr., and C. P. Patton, Commission of Game and Inland Fisheries, Richmond, Va., 1947. 6½ x 9¾ inches, 220 pages, illustrated. \$3.00.

This book is a product of the Virginia Cooperative Wildlife Research Unit. It opens with a series

of interesting chapters dealing with mammals by groups, i.e., game, furbearers, rodents, vanished, etc., in which the history and present status of each species in the group is discussed. A check-list, key and a complete series of systematic accounts follow. Each with a range map and a series of standard headings for paragraphs which cover such points as type, locality, distinguishing characteristics, measurements, habitat, etc.

### THE MAMMALS OF VIRGINIA

By J. W. Bailey, Published by the author, 27 Willoway Road, Richmond, Va., 1946. 6½ x 9½ inches, 416 pages, illustrated. \$5.00.

This is a rather general book on mammals, but limited to those species that occur in Virginia. Dr. Bailey, who is professor of biology at the University of Richmond, has provided much useful information in his introductory section that covers a wide variety of topics from "What Is a Mammal?" to "The Geologic History of Mammals." The main body of the book treats each species in detail but contains very little data relating specifically to their habits and status in Virginia.

### MAMMALS OF CALIFORNIA

By L. G. Ingles, Stanford University Press, Stanford, Calif., 1947, 7½ x 10¼ inches, 258 pages, 42 plates, 67 figures. \$4.00.

This is an excellent handbook well designed to fit the needs of the amateur mammalogist and interested layman. The author has very sensibly confined himself to full species, and in the case of some of the closely related rodents, only one key species in each genera is treated in full. There are simple keys, range maps and photographs of almost every species. The accounts are well organized and very readable and cover habits, habitat, life history and economic relations.

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### MAMMALS OF EASTERN ASIA

By G. H. H. Tate, The Macmillan Co., New York, N. Y., 1947. 5½ x 8½ inches, 366 pages, illustrated. \$4.00.

This is another unit in the Pacific World Series issued under the auspices of the American Committee for International Wildlife Protection. Following some thirty pages of interesting introductory material on mammals and the mammal habitats of Eastern Asia, the systematic section takes them up by orders, families and genera; and where of sufficient interest, by individual species. Thus, most of the larger or more unique forms are covered in detail and in many cases portrayed in excellent drawings. Unfortunately, there is very little room for any material on such matters as life history, economic relations, etc.

## INSECTS AND SHELLS

### A FIELD GUIDE TO THE SHELLS—OF OUR ATLANTIC AND GULF COASTS

By Percy A. Morris, Houghton Mifflin Company, Boston, Mass., 1947. 4½ x 7½ inches, 190 pages, 40 plates (8 in color). \$3.50.

The Peterson field guides to birds have been so satisfactory and successful that he is now editing a whole Field Guide Series for the Houghton Mifflin Company. This volume on the shells of the common Pelecypods and Gastropods of the East Coast is the first under another authorship. The plates contain photographs of every species covered (often from several angles) and serve as the key to the probable identity of an unknown shell which can then be checked against the description in the text. English names are played down, the Latin names being used almost exclusively. Unfortunately, there is room for only the briefest mention of the habits, habitat and life history of the animals that make and wear these shells which, after their death, wash up on the beaches where we find them.

### INSECTS OF THE PACIFIC WORLD

By C. H. Curran, The Macmillan Company, New York, N. Y., 1946, 5½ x 8¼ inches, 317 pages, illustrated. \$3.75.

This book covers in systematic order the families of insects that are to be found in Japan, Australia and the islands of the southwest Pacific. In some cases the family is discussed in general terms with little or no reference to Pacific species while in others key genera or species are mentioned and something is given about their appearance and life history in the area under consideration. Dr. Curran has a wonderful fund of information about insects which makes the book very interesting reading.

## FOR YOUNG READERS

### COYOTES

By Wilfrid S. Bronson, Harcourt, Brace and Co., New York, N. Y., 1946. 6½ x 8½ inches, 60 pages, profusely illustrated. \$1.75.

Here is another of Mr. Bronson's superb books for children. His pen and ink drawings that occupy about as much space as the text are excellent and an integral part of the story. The text in large bold type sets forth very simply and sympathetically the pertinent facts concerning coyotes, how they live and their relations with man. This is decidedly not just another children's picture book, but a fine and accurate picture of this very interesting animal from which the average parent will learn almost as much as his children.

### THE SILVER ROBIN

By Dean Marshall, E. P. Dutton & Company, New York, N. Y., 1947. 6¼ x 8¼ inches, 246 pages, illustrated. \$2.50.

This is pure fantasy with various species of birds as the characters. It is designed for young children and deals with adventures that the wild creatures of the woodland might have if they were little people and could think and talk.



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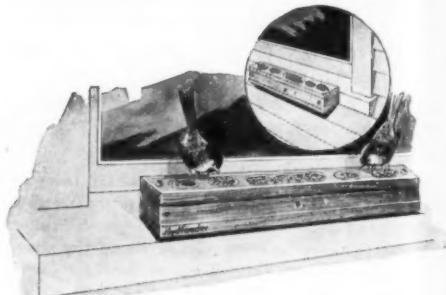
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## ANIMAL INN—THE STORIES OF A TRAIL-SIDE MUSEUM.

By Virginia Moe, Houghton Mifflin Company, Boston, Mass., 1946. 7 1/4 x 9 3/4 inches, 174 pages; profusely illustrated by Milo Winter. \$2.50.

The pictures and text combine to make this book as amusing and attractive as it is useful to anyone who wants to know how to take care of a wild pet or run a classroom zoo. It is the story of some of the more notable residents of the trailside museum in Chicago's Thatcher Woods in the Forest Preserve. Most of the characters arrived as helpless infants and stayed not only to amuse and educate but to engender among the Museum's youthful visitors that sympathy and liking for wild animals that marks the true naturalist. Don't miss it! It is a book you will want to sit down and read from cover to cover.

## KLEEW

By Nikolaas Tinbergen, Oxford University Press, New York, N. Y., 1947. 6 1/4 x 8 3/4 inches, 42 pages, profusely illustrated. \$1.50.

Here is a fascinating children's book about a pair of gulls, written and illustrated by one of the world's leading students of bird behavior. It is a model of how to write about birds for children—truthful, accurate and a refreshing contrast to the all too common method which simply makes them into little human beings. Dr. Tinbergen is a Hollander and the episodes in this story were written for his children as part of his letter home from the hostage camp where he was held for two years following the closing of the University of Leiden.

The gull illustrations which decorate this book review column are a sample of Dr. Tinbergen's charming sketches in "Kleew."

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**The Index for 1947**

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Photograph of dandelion by Stewart Merk. For your files, paste on page 236, July-August.

The Picture Editor, born in Texas where toads have horns, saw no reason why dandelion leaves shouldn't have prickles. In the July-August issue a photograph of a bull thistle was labeled "The lion's tooth." The correct picture appears above.

## Our Very Own Follies of '47

Our magazine follies may not be as glamorous as the late Ziegfeld chorus, but here they are. A reader recently suggested that we get pencils with erasers. The trouble is the erasers get used up before the pencils do!

In January-February the photograph of blue geese which appeared as a frontispiece, page 2, was made by Charles Broley.

This is a  
**Dandy Lion**  
It was erroneously credited to Allan Cruickshank, who has taken many good pictures but didn't take that one.



Drawn by  
Robert  
Seibert

In September-October the painting by Peter Scott, page 261, was labeled "Mallards by the Willows." Several people have noted that the ducks are not mallards; the general agreement is that they must be canvasbacks. In the same issue, page 288, the caption was reversed to make the yellow-throated vireo "more abundant than the red-eyed"; the opposite of course is true.

We humbly beg pardon and hope to be more accurate in 1948.

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As this issue of Audubon Magazine goes to press, the Annual Convention is opening in New York. See the President's Report, in the January-February issue, for convention news.

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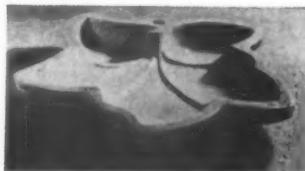
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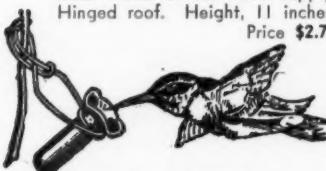


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